

THE SCHOOL REVIEW

A JOURNAL OF SECONDARY EDUCATION

VOLUME XLI

JUNE 1933

NUMBER 6

Educational News and Editorial Comment

CARDINAL CONCLUSIONS CONCERNING SMALL HIGH SCHOOLS

An important project of the National Survey of Secondary Education which has not thus far been recognized in the *School Review* beyond a mere mention is the investigation of the problems of the small high school. The report of the project will be published as Monograph Number 6 under the title *The Smaller Secondary Schools*. Professor Emery N. Ferriss, of Cornell University; W. H. Gaumnitz, of the regular staff of the United States Office of Education; and P. Roy Brammell, a full-time member of the survey staff, carried through this project in collaboration. In essence, the project involved a comparison of selected and unselected small secondary schools. The list of selected schools was made up from results of inquiries sent to state supervisors of high schools and professors of secondary education in higher institutions and from descriptions in educational literature of unusual small schools. The unselected schools represented as nearly a random group of small schools as could be induced to respond to the inquiry forms devised to secure the information needed. Each of the two classes of schools, the unselected and the selected, was divided into groups according to size of enrolment, and comparisons of the schools were made size by size with respect to many features that go to make up a school. A host of

specific conclusions were drawn from the evidence of this large-scale investigation, but for these the reader must be referred to the full report. The most that can be done here is to present certain major implications of the whole study.

A manifest conclusion from an overview of the evidence of the project pertains to the all but fully consistent superiority of the selected over the unselected schools represented. To be sure, it is an *average* superiority of one class over the other rather than the superiority of all selected schools over all unselected schools; among schools of equivalent enrolments many unselected schools are indubitably better in some respects than many selected schools. Nevertheless, the general trend of superiority is too marked to be gainsaid.

The selected schools are in larger districts than are unselected schools of equivalent enrolments. The selected schools are more often in consolidated districts. They more often provide transportation, and they provide it for a larger number of pupils. They retain pupils better—at least when they are reorganized schools. Their class periods are longer. They more often provide the service of part-time librarians, and these librarians have had more training for their work than part-time librarians in unselected schools. The principals of the selected schools are better trained with respect both to the total duration of training and the amount of work taken in the special field of education. The tenure of these principals is longer, their teaching loads are more reasonable, and their salaries higher. The selected schools are better provided with material facilities, particularly in such matters as size of grounds, service equipment, special rooms, space and equipment for libraries, equipment for motion and still pictures, and free textbooks. They are superior with respect to instruction in that they have more often in recent years made certain additions to the curriculum, are making more frequent use of newer methods of teaching, and are carrying on a greater range of supervisory activities. In the extra-curriculum, in pupil accounting and guidance, in extending their educational service, and in their community relationships, they have gone farther than have the unselected schools. In two respects only are the unselected schools on a par with the selected schools, namely, in the tenure and in the salaries of teachers.

Thus, the first general implication from all the evidence is that, if the selected schools are providing the facilities and carrying on the activities represented in these aspects of superiority, other schools of the same size may well be expected to do the same. The whole study has not, to be sure, gone into the question of the local financial resources available to the selected and the unselected schools in order to ascertain whether the selected schools are better off financially than the unselected schools. It is almost certain that the selected schools are superior in this respect as well as in others. If this assumption were found to be a fact, the problem would become one of equalization of educational opportunities and stimulation by the state. In these times of a rather general acceptance of the principle of state equalization and stimulation, it seems appropriate to concede that, to some extent, incorporation in small communities of the features of good schools should be made feasible by the state, especially if the principle is not carried so far as to minimize too greatly the advantage of size also demonstrated in this investigation.

An implication subordinate to that just stated, but important nevertheless, pertains to the significance of educational leadership in the smaller schools. The study has shown that principals in the selected schools on the average have more extended training, hold higher degrees, and have had more work in the field of education. Besides, they have longer tenure and receive higher salaries. It seems more than likely that many of the other superiorities reported for the selected schools are directly attributable to the greater competence of the heads of these schools reflected in the evidence on these points. Although relationships in this regard are doubtless somewhat reciprocal and although better schools would to some extent attract better leadership, one can hardly doubt that some of the superiority of the selected schools has resulted from superior competence of the school heads. It is worth mentioning in passing that the superiority has been accomplished despite a level of salaries of teachers no higher than that in unselected schools. Unquestionably, one of the first approaches in the effort to improve a small school must be to place it in charge of a competent leader.

A second conclusion from the evidence of the whole study concerns the significance of size of school. The fact is that the differ-

ences between the measures reported for a group of one size and the measures for the next larger group among the unselected schools are typically greater than the differences between the measures of the groups of corresponding sizes among the selected schools. This conclusion has the corroboration of an important finding of the project of the survey relating to the reorganization of secondary education, a finding which is to the effect that, as concerns schools with smaller enrolments, size is a more potent factor of the extent of reorganization than is type of organization. The conclusion from the present investigation is another way of saying that size is a more important factor than selection in making for constructive difference among small schools. It would be difficult, if not impossible, to conceive of a conclusion more momentous for the problem of the small high school.

The obvious implication from this finding is that the very small high schools ought to be kept to as small a number as possible. This implication has meaning for all who deal with the problem of small schools, whether they are persons in the localities where these small schools are operating or contemplated or whether they have to do with the determination of state policy in the establishment and maintenance of schools. State policy can be exceedingly influential here and should encourage the establishment only of high schools of advantageous size. Doubtless there are in most states sparsely settled areas that should be provided with secondary-school opportunities even if enrolments are small, but these should be looked upon as atypical developments. After authorization, a school in such an area should be aided in providing the features of a good institution, as suggested in the foregoing discussion of the first major implication from the study, but the normal and basic assumptions should be that it is easier to provide a good school where a sizable enrolment is assured and that to maintain a good school with a small enrolment is always an uphill and often an impossible task.

THE PROGRAM OF GUIDANCE IN MINNEAPOLIS

A recent issue of the *Vocational Guidance Bulletin*, published by the Minneapolis Public Schools, is devoted to a simple and direct description of the program of guidance in operation in that system. The entire article merits quotation here, but limitations of space

preclude reproducing more than half. In order that the reader may be given a better notion of the scope of the whole program, it may be reported that the more important sections omitted deal with the co-ordinators in the vocational schools, the city-wide program of visits to industries by pupils, the conferences of high-school Seniors with business men and women, the special counseling provided for handicapped pupils, the program of measurement, and the occupational research being carried on to provide reliable information for pupils and counselors. The program appears to be erected on a reasonable concept of guidance and not on a concept which confuses guidance with the whole of education—a concept, for example, that extends guidance to include even the teaching process and character education.

Since guidance is a part of the whole process of education, responsibility for it rests primarily on the teachers and principals in their daily contact with pupils. In the Minneapolis Public Schools additional provision for vocational and educational guidance is made by assigning counselors to each of the high schools. Assistance in handling other guidance problems is given by special workers in other departments, such as the Child Guidance Clinic, the Attendance Department, and the Visiting Teachers Department. This bulletin describes these special provisions for guidance and the major curricular activities that contribute to the guidance of high-school pupils.

As long ago as 1914 definite thought was given by Minneapolis school administrators to developing methods of meeting the need for vocational guidance. For a number of years such workers as could be assigned to this problem were associated with the Attendance Department and devoted their attention primarily to the guidance and placement of pupils at the school-leaving period. In 1927 the guidance program was reorganized, and counselors were assigned to each high school. At the present time each junior high school has a person devoting half time to counseling; each senior and junior-senior high school has a person giving full time, or two persons each devoting half time to this work. This makes a group of twenty counselors, associated under a supervisor of counselors. They are working in eleven junior high schools, six senior high schools, and two junior-senior high schools. In addition, the vocational schools have four co-ordinators, each devoting half time to counseling of pupils taking the trade courses and to the supervision of their employment.

In their respective schools the counselors are the specialists in vocational and educational guidance and, under the principal, are responsible for the promotion and the co-ordination of the guidance activities carried on within their schools, as well as for helping pupils with their individual problems.

In the junior high schools counselors find that their work with pupils includes

helping VII B pupils to become oriented to their new school environment, helping pupils new to the Minneapolis schools to become properly adjusted, assisting VIII A pupils with choice of ninth-grade electives, assisting IX A pupils with their program plans for high school, and conferring with pupils who wish vocational-school training. They make any possible adjustment for pupils of exceptional ability; work with individual pupils who are, for any reason, unsuccessful in school; and supply pupils, parents, and teachers with information about vocations and courses of training leading to vocations. All of this involves meeting pupils both individually and in groups, holding conferences with teachers and parents, keeping records of pupils' aptitudes and plans, and assembling and filing current occupational information and educational bulletins.

Counselors in the senior high schools find that their work includes most of the activities already mentioned. In addition, they arrange for vocational conferences led by business men and women, co-operate with the University of Minnesota in giving and interpreting to pupils college-aptitude tests and in preparing college-entrance application blanks, and work with the Placement Department in referring pupils desiring positions and in summarizing personnel data about pupils for the placement-office files. Since there are no visiting teachers and no deans in the senior high schools, welfare problems, such as providing books to needy pupils and making provision for clothes and lunches, have become pressing problems during this period of economic stress.

Each school counselor has a small office located near the other offices of the school which insures privacy to pupils in discussing their problems. It also gives the counselor easy access to pupil records and provides a place for conferences with teachers and parents.

All Minneapolis high schools and junior high schools are organized upon the home-room plan. "The home-room teacher makes an effort to know each pupil's interests, aptitudes, personal characteristics, attitudes toward and opportunities for continued schooling; to follow up and recommend adjustments to prevent recurrence of failures; to assist in the development of desirable personal and civic traits; to keep parents informed of pupil progress; to anticipate and refer withdrawals; in short, to be a friend to each home-room pupil with personal helpful interest in each" ("Know Your School," Franklin Junior High School, 1933). In most junior high schools the home-room teacher meets her group for a period of about ten minutes each day to handle the many minor matters of attendance, notices, reports, and banking that are a part of the family life of her group, and for forty-five minutes at least once a week to discuss some guidance problem. In several of the junior high schools the guidance period is given over to discussion of subjects suggested in an outline of guidance-period activities prepared by a committee of teachers. As in all families, it becomes necessary to call in specialists at times, and occasionally in this school family the home-room teacher calls for assistance from the visiting teacher, the counselor, the nurse, the principal, or the Child Guidance Clinic. . . .

Since 1920 the Minneapolis Public Schools have maintained a centralized

placement office to assist young people who leave school with the many problems involved in getting fitted into positions. To this office the high-school counselor sends a personnel card giving a summary of the school record of each pupil who graduates from high school. Records are on file also for many pupils who withdraw earlier. Thus guidance and placement in this office are based upon definite information regarding each student gathered from his school record, as well as from interviews, and the placement counselor keeps in close touch with the school counselor who knows the student. Contact with employers is made through visits, letters, and telephone calls, and data are kept on file regarding business firms where placements are made. Follow-up studies of all high-school graduates have been made by this department at three-year intervals.

During this period of economic depression an effort is made to give what jobs are available to the young people who need them the most, and to give help on personal problems to the many young people who cannot obtain work. Especial emphasis is put upon the profitable use of their leisure time.

The study of occupations forms a major part of the work in the second semester of Community Life Problems, which is the social-studies course required of all ninth-grade pupils. The purpose of this unit is not to stimulate pupils to a final choice of a vocation but to develop a realization of the complexity of occupational life and the necessity for careful adjustment to it. The unit in occupations follows a study of the Industrial Revolution, and it includes consideration of such economic problems as distribution of labor, causes of unemployment, and methods of wage payment, as well as an analysis of various types of occupations. Each pupil also studies more intensively an occupation of special interest to him. Special attention is given to a consideration of training necessary for different occupations and to a study of the educational opportunities of the city. At the close of the unit pupils consider their own aptitudes and interests, and with the help of teacher and counselor make tentative plans for their courses at high school or vocational school.

Materials for the Community Life Problems course are gathered not only from a textbook but from reference books, periodicals, pamphlets, and trips to industries. A filing cabinet in a classroom of each junior high school serves as a means of keeping current material. The course is taught by social-studies teachers, and usually part-time counselors do their teaching in this field. . . .

Minneapolis has a staff of nineteen visiting teachers assigned to the junior high schools, the Department of Special Education, and twenty-six of the elementary schools. There are also ten social workers in the Attendance Department who serve the senior high schools and the elementary schools that are without visiting-teacher service. These workers are called upon for assistance when the counselor, principal, or teachers feel the need for study of the social and emotional factors affecting the child in his home and community relationships. These workers handle primarily cases involving behavior and personality difficulties, non-attendance, difficult home conditions, and lack of success in school work. They make case studies and through home visits develop a better under-

standing between the school and the home. Whenever such help is needed, they seek assistance from the Child Guidance Clinic, the churches, and the social and community agencies. The visiting-teacher work differs from the counselor's in that she handles more intensively a comparatively small number of children with definite social and personality difficulties, while the counselor meets a large number of pupils for consideration of educational and vocational adjustments.

To the Child Guidance Clinic are referred problems of children in whom the discrepancies in behavior show strong indications of emotional disturbances. The staff of this clinic includes a consulting psychiatrist, a consulting pediatrician, a clinical psychologist, and two psychiatric social workers.

Before clinical examinations are made, as complete a picture as possible of the child's previous experiences and his family relationships is obtained. After the physical and psychological study, the child is encouraged to give a spontaneous account of his own situation. At a case conference of the teachers and others who are interested, an interpretation of his problem and suggestions for improving his adjustment are formulated. The clinic follows up the progress of the treatment and frequently continues its contact with the child over a prolonged period. Through the clinic the attention of teachers and counselors is directed to the mental-hygiene aspects of child behavior.

THE CHAIRMAN OF THE COMMITTEE ON PUBLIC EXPENDITURES REMONSTRATES

Regular readers may recall that the first editorial in the March *School Review*, under the caption "A Dictatorship of Big Business," warned against the menace to the schools and to the principles of American government represented by the Committee on Public Expenditures in Chicago and similar "citizens' committees" at work throughout the country. Subsequently the editor received from Fred W. Sargent, chairman of the Chicago committee, a letter remonstrating against the attitude expressed in the editorial. The letter is here reproduced, together with the letter written in response.

April 25, 1933

Mr. Leonard V. Koos, Editor
The School Review
5835 Kimbark Avenue
Chicago, Illinois

MY DEAR MR. KOOS: I have read with some disappointment the article entitled "A Dictatorship of Big Business," which rather severely takes the Committee on Public Expenditures to task for the work it is doing in Chicago. I also think it takes the Committee to task in an unjustifiable way, as no attempt has been made by "big-business" to run the schools, and no such inference can be correctly drawn from my article in the *Saturday Evening Post*.

The taxpayers of Chicago, through our Committee, are earnestly striving to help the community maintain its credit and thereby keep the schools open, and no effort has been made to destroy them.

The inferences, conclusions, etc., drawn from the article in the *Saturday Evening Post* are apparently done so for the purpose of setting up a "bogeyman" or organization to attack.

The schools have no better friends than the business men, the Committee on Public Expenditures and myself in the City of Chicago or elsewhere. We propose to see that expenses are so reduced where they ought to be reduced, and the school system reorganized on such a basis that it can re-establish its credit and give its children a reasonable education and ultimately pay its teachers without again passing through this kind of a debacle, created out of vast extravagance and wastefulness, without proper system and organization, to say nothing about the possibility of fraud that may or may not have existed.

May I also ask which side of this controversy the University of Chicago is really on? Your editorial criticizes unjustly, through a process of drawn inferences, the Committee on Public Expenditures, yet, during the past week, I have received a letter from the Business Manager of the University of Chicago highly praising and commending the work of the Committee.

Again, may I inquire, will the University of Chicago be frank enough to take the same position from the standpoint of education that it is taking from the standpoint of the taxpayer?

I am,

Sincerely yours,

[Signed] FRED W. SARGENT

May 5, 1933

Mr. Fred W. Sargent, Chairman
Committee on Public Expenditures
400 West Madison Street
Chicago, Illinois

MY DEAR MR. SARGENT: I have your letter of remonstrance against the viewpoint taken in the editorial in the March *School Review* entitled "A Dictatorship of Big Business." May I say that since the preparation of the manuscript of the editorial late in February I have been struck by the unanimity with which other friends of the schools have come to the same conclusion as I concerning the sinister influence represented in the activities of these "citizens' committees" at work throughout the country. It will require more than mere assertion that such committees are friendly to education to re-establish confidence in the membership of these committees and in the business and industrial organizations with which the members are associated. Those who are now doubtful will need substantial evidence of genuine friendliness before their present suspicions are allayed. I shall be on the lookout for such evidence and will be glad to report it when I am convinced of its sincerity.

In answer to your question as to "which side of this controversy the Univer-

sity of Chicago is really on?" may I say that in preparing the editorial I did not inquire what position, if any, the University of Chicago has taken on the question. I was not undertaking to speak for the University or for any of its officers and wrote merely as editor of the *School Review*, expressing my personal-professional opinion.

Sincerely yours,

[Signed] LEONARD V. KOOS

Editor, *School Review*

THE RE-EMERGENCE OF THE FEDERAL CHILD-LABOR AMENDMENT

Under the caption "A 'New Deal' for Children, Too!" the April number of the *American Child*, organ of the National Child Labor Committee, publishes the following editorial. We are glad to quote it in full.

After lying buried under the rejections of twenty-six states for years, the Child Labor Amendment is staging an almost sensational comeback. As one result of depression conditions, public opinion has been veering rapidly toward federal control as the most effective means of preventing industrial exploitation. From Pennsylvania, the state employing the largest number of children under sixteen years of age in manufacturing and mechanical occupations, according to the Census of 1930, comes a warning:

This pending amendment is a reminder that unless the states which for years have tolerated child labor in its most vicious form shall of themselves reform that situation, national opinion and constitutional change will yet be invoked. Unless reforms are made within the next few years, it is virtually certain that there will be renewed agitation for ratification of this amendment [*Philadelphia Public Ledger*].

That a definite trend in this direction is already under way, the recent history of the Child Labor Amendment shows. During nine years only six of the necessary thirty-six states ratified it. These were Arizona, Arkansas, California, Colorado, Montana, and Wisconsin. In the past two months, four additional states have added their approval—Oregon, Washington, North Dakota, and Ohio—bringing the total up to ten. A few weeks before the Ohio legislature ratified, the *Cincinnati Enquirer* stated editorially:

The desirability of restricting child labor is no longer questioned. The only controversial point in connection with the Child Labor Amendment, and it is a vital one, is whether the federal government ought to have this power added to its growing functions. The inescapable trend is towards nation-wide regulation of working conditions, and this applies with especial force to child labor, now that the federal government is interesting itself in child welfare along so many other lines.

Resolutions for ratification have been introduced in nine other state legislatures this winter. In six of these, they are still pending: Minnesota, where the House has voted favorably, New Jersey, New York, Pennsylvania, Maryland,

and Michigan. In Iowa and Wyoming the bills were indefinitely postponed, and in Kansas the measure was favorably reported, but the legislature adjourned without taking action.

The spectacle of children competing in the labor market when millions of adults cannot find work, and their exploitation under sweatshop conditions of labor, undoubtedly accounts for the sudden revival of interest in the amendment. A flood of editorials calling for federal control of child labor has appeared in the newspapers since the first of September, and more than half of them have been concentrated in the two months of the legislative season. In New England, where the fires of opposition burned hottest a few years ago, there is now some feeling that it is scarcely worth while to ratify an amendment which would regulate the employment of minors under eighteen only! As the *Springfield* (Massachusetts) *Republican* puts it:

Success may not now seem probable, but it is possible and would write into constitutional history an extraordinary chapter. . . . But . . . the amendment as submitted in 1924 would now be too narrow to satisfy those who want Congress to regulate the adult labor of both sexes.

In New York the *World-Telegram* voices vigorous support for the amendment:

Grown-ups who sit idly at home and watch their children go out to earn the family bread are not going to believe the fantastic tales spread to defeat the amendment any longer. . . . There is now a chance that the amendment may be ratified before the year is over, under the stress of necessity. If this happens the depression will not be without its bright spot.

We are hearing on every side the promise of a "new deal"—for banks, for industry, for agriculture, for trade, for the unemployed. Ratification of the Child Labor Amendment would set the federal government free to give a new deal to child workers, also. One thing is sure—that if this power were granted, the leadership of President Roosevelt could be counted on without reservation in carrying through a well-founded program of child-labor reform.

THE CUBBERLEY COMMEMORATION

Almost coincident with the date of publication of this issue of the *School Review*—June 6, in point of fact—will be held at Stanford University a meeting of Dean Ellwood Patterson Cubberley's friends and students. The date of the meeting marks his retirement from administrative service at that institution. The affair is one item in a four-point program to commemorate Dean Cubberley's service to education, the three remaining items being the completion of a portrait to be presented to the School of Education of Stanford University, the publication of a commemorative volume containing con-

tributions from national leaders in education on various aspects of educational progress, and the endowment of a lectureship that will provide annual visits to Stanford University on the part of outside lecturers of national or international renown. The retirement of a Cubberley from active connection with an institution like Stanford is ample justification for stepping aside in the *School Review* from exclusive concern with impersonal treatment of the organization and process of education to join in such a personal commemoration.

The *California Quarterly of Secondary Education* for April appropriately emphasizes "The Cubberley Commemoration." In addition to describing the plans for the commemoration, the *Quarterly* published a number of brief articles descriptive of Dean Cubberley's distinguished and diverse service. Our participation in the commemoration is limited to quoting from several of the articles certain paragraphs descriptive of this distinction and diversity.

President Ray Lyman Wilbur writes as follows of Dean Cubberley's significance to Stanford University:

Every university rises and falls with the men and women making up its faculties. Dean Cubberley became a national figure in the university world. His lectures and services in other institutions did much to bring Stanford into the national picture. His full significance to Stanford is hard to estimate at the present time. We can see his influence upon the University, not only as a faculty member, as a teacher and as an administrator, but as a great citizen serving in the field of public education. The University is proud of his record and of the fine recognition that has come to him from his associates, friends, and the public.

In the following brief paragraph Vierling Kersey, superintendent of public instruction in California, summarizes the significance of Cubberley's influence in state school administration.

The name of Ellwood P. Cubberley ranks as one of the first in the field of state school administration. His chief contribution has been through his writings, and his numerous works are universally recognized as a leading authority in this field. Thousands of educators in the United States and in foreign lands have been profoundly influenced by his books. It is no exaggeration to state that nearly every professionally-trained school administrator in the nation has been influenced and benefited through one or more of Cubberley's volumes.

Walter R. Hepner, superintendent of schools in San Diego, writes as follows of the service of his early predecessor in that position:

Dr. Ellwood P. Cubberley was superintendent of schools in San Diego from June, 1896, to July, 1898. These two years were a fortunate period in the history

of education in San Diego. In this short span professional principles in school management were established, curriculums were reorganized, business procedures were improved, growth in morale was stimulated, and the confidence of the people of the community in the work of the public schools was definitely extended. A review of the official records of educational achievement and interviews with teachers and citizens of this period furnish a background for understanding the prestige which the public schools now enjoy among thoughtful citizens. Educational leadership during this period fixed a pattern of expectancy of achievement and service that successors to Ellwood P. Cubberley have found difficult to meet.

W. W. Kemp, dean of the School of Education at the University of California, writing on "Dean Cubberley and Schools of Education," says:

The roster of Cubberley's students is exceedingly large. They are found in the faculties of nearly every university school of education, and they are represented as members of educational departments in a very large number of the country's state teachers' colleges and normal schools. Few educational leaders in our time have had so widespread an influence on the modern department of education. Verily, Cubberley's work will live far into the distant years.

Professor Walter Crosby Eells of Stanford, well known in the junior-college field, quotes the following paragraph from Cubberley's writings to demonstrate his comprehension of the significance of the junior-college movement.

This development seems by now to be so well under way in the United States that it may be accepted as a certain ultimate expansion in American public education. The very rapid growth of our universities, the great cost and difficulty of duplicating them in a number of places in the state, the fact that the greater number of university students are in these two lower years, and that these years represent a continuation of the general and cultural work of the high school—these and other considerations are pushing to the front the question of the decentralization of the first half of the older college course, the reduction of the Freshman and Sophomore years to a largely self-sustaining preparatory department, and the development of the university as a group of professional schools beginning at the Junior year. This would establish junior-college advantages in numerous centers in the state; would carry collegiate education to numbers not now possible of reach; would in time largely pass over much of our present type of university extension work to the junior colleges to handle; would probably result in better collegiate instruction than the universities, with their large classes, can any longer provide; would tend to end general and cultural training at twenty, instead of twenty-two; and would enable the universities to concentrate their efforts on research and the more costly types of professional instruction.

Of Cubberley's significance for school surveys, Professor J. Harold Williams, of the University of California at Los Angeles, writes:

The school survey, as Cubberley conceived it, was to provide the stimulus for a long program of constructive community planning, with special reference to the adaptation of the schools to local needs. Both the Portland and the Salt Lake City surveys begin with a study of the community; its economic position, the character of the population, the political organization and its relation to the state. The development of the school system into a unit which can better serve such a community is the objective of every problem studied. The recommendations include proposals for improved financing, more efficient use of the school plant, better teaching, greater flexibility in curriculum construction, utilization of community resources for health work. The practical usefulness of such suggestions is attested by the school improvements which have invariably followed the Cubberley surveys.

Perhaps Cubberley is most widely known as author and editor. Of his work in this relationship, Franklin S. Hoyt, editor of the Educational Department of Houghton Mifflin Company, has the following to say:

The quarter of a century that the writer of this article has worked in close co-operation with Dr. Cubberley in the projection, development, and publication of the volumes in the Riverside Textbooks in Education has revealed in a striking way the characteristics that have made Dr. Cubberley a great force in modern education. The manuscripts for his own books that have come to us fresh from his pen and prepared to the last detail for the press have been a joy, heightened by the contrasting difficulties often experienced in the case of other manuscripts submitted to us supposedly ready for the press. Likewise, his careful reasoning and sound judgments on books submitted for inclusion in his series have made the work of selection and publication an easy and delightful process. From the inception of the series he has always had clear, definite ideas regarding the books that were needed to carry out a modern program of education. His accuracy of judgment, his foresight in selecting authors to write books that are needed, and his inspiring helpfulness in guiding the authors to a successful completion of their books have made possible the outstanding success and widespread influence of the series.

Others who wrote brief articles indicative of Cubberley's service and relationships are Walter L. Bachrodt, superintendent of schools at San Jose; T. W. MacQuarrie, president of the State Teachers College at San Jose; Lester B. Rogers, dean of the School of Education at the University of Southern California; and Dorothy Putnam, for many years Dean Cubberley's secretary.

One of the most appropriate statements published in this com-

memorative issue of the *California Quarterly* is that by the editor, in which he says:

The date for Dean Cubberley's retirement was ordained sixty-five years ago. But what folly to talk about retiring a man of Dr. Cubberley's strength of body, keenness of mind, and broad and vital interests, at sixty-five! He may slightly change his pattern of work, but he will not retire from educational service in another two decades.

THE INSTITUTE FOR ADMINISTRATIVE OFFICERS
OF HIGHER INSTITUTIONS

The Institute for Administrative Officers of Higher Institutions will be held in Leon Mandel Assembly Hall at the University of Chicago on July 12, 13, and 14, 1933. The University extends to administrative officers of all higher institutions, including liberal-arts colleges, universities, teachers' colleges, and junior colleges, a most cordial invitation to attend this institute. Arrangements have been made for visitors who attend the institute to visit classes and to enjoy other University privileges without the payment of fees. Room and board will be provided in the men's dormitory from Wednesday morning, July 12, to Friday evening, July 14, for \$8.75. Arrangements may be made through William J. Mather, Bursar of the University of Chicago.

The central theme of the institute will be "Readjustments in Higher Education To Meet New Conditions." The program for the various sessions of the institute follows.

Wednesday Morning, July 12

NATURE OF THE EMERGENCY

"The Present Emergency in Higher Education," Robert Maynard Hutchins, President of the University of Chicago

"The Efficacy of the Depression in Promoting Self-Examination," Lotus D. Coffman, President of the University of Minnesota

"The Influence of Social Trends in Educational Reform, with Special Reference to Civic Education," Charles E. Merriam, Chairman of the Department of Political Science, University of Chicago

Wednesday Afternoon, July 12

READJUSTMENTS AFFECTING INSTRUCTION

"Fundamental Reforms in Instruction," Lotus D. Coffman, President of the University of Minnesota

"Readjustments at Ohio State University," Arthur J. Klein, Professor of Higher Education, Ohio State University

"Readjustments at Bucknell University," Homer P. Rainey, President of Bucknell University

Thursday Morning, July 13

READJUSTMENTS AFFECTING THE ORGANIZATION OF HIGHER EDUCATION

"The Reorganization and Co-ordination of Secondary and College Education," Charles H. Judd, Dean of the School of Education, University of Chicago

"Needed Readjustments in the Organization and Administration of State Systems of Higher Education," George A. Works, Professor of Education; Dean of Students and University Examiner, University of Chicago

"Standards of Accrediting Agencies in Relation to Economies," George F. Zook, President of the University of Akron

Thursday Afternoon, July 13

READJUSTMENTS AFFECTING STUDENT LIFE

"Adjustments in Student-Personnel Work," Aaron J. Brumbaugh, Assistant Professor of Education; Dean of Students in the College, University of Chicago

"Provisions for the Financial Support of Students," Robert C. Woellner, Assistant Professor of Education; Executive Secretary, Board of Vocational Guidance and Placement, University of Chicago

"Readjustments in Athletic Programs," Thomas N. Metcalf, Director of Athletics, University of Chicago

Friday Morning, July 14

SOURCES OF REVENUE AND UNIT COSTS

"The Management of Endowment Funds," Floyd W. Reeves, Professor of Education, University of Chicago

"Taxation as a Source of Support for Higher Education," Simeon E. Leland, Professor of Economics, University of Chicago

"Student Fees as a Source of Support for Higher Education," John Dale Russell, Associate Professor of Education, University of Chicago

Friday Afternoon, July 14

FINANCIAL READJUSTMENTS IN TYPICAL INSTITUTIONS

"Readjustments in a Land-Grant College," R. M. Hughes, President of Iowa State College, Ames, Iowa

"Readjustments in Liberal-Arts Colleges," Homer P. Rainey, President of Bucknell University

"Readjustments in an Endowed University," Nathan C. Plimpton, Comptroller, University of Chicago

INTERSCHOLASTIC NON-ATHLETIC ACTIVITIES IN SELECTED SECONDARY SCHOOLS

WILLIAM C. REAVIS
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PROBLEM AND SCOPE OF THE INVESTIGATION

The prominence of interscholastic athletics has tended to obscure the place and the importance of other interscholastic activities of the non-athletic type in secondary schools. Even in schools having innovating practices in extra-curriculum activities, interscholastic non-athletic contests, tournaments, and meets occupy a subordinate position when compared with athletic competition. Less publicity is given in the public press and in school publications to non-athletic activities; less money is expended by the schools in their support; and, in general, less thought appears to have been given to their organization and administration.

The problem of ascertaining the possibilities of interscholastic non-athletic activities in secondary schools was assigned to the writer as a phase of one of the projects of the National Survey of Secondary Education. Schools with innovating practices in the organization and administration of non-athletic extra-curriculum programs were selected for study in order that the findings might reveal to other schools the possibilities of such activities.

A check-list inquiry form was prepared and mailed to 399 schools selected on the basis of information available in the United States Office of Education. This information indicated that these schools had made significant progress in interscholastic non-athletic activities. Replies were received from 224 schools, which were distributed according to geographical location as follows: New England, 22; Middle Atlantic states, 40; southern states, 40; middle western states, 91; and western states, 31.

This group of 224 schools included 64 junior high schools scattered in 26 states and the District of Columbia, 38 senior high schools in 21 states, 89 four-year high schools in 36 states and the District of

Columbia, and 33 six-year high schools in 18 states. The distribution of the schools according to enrolment was as follows: Twelve and one-tenth per cent were small schools enrolling 100 pupils or fewer; 21.4 per cent enrolled from 101 to 300 pupils; 21.9 per cent, from 301 to 750 pupils; 32.1 per cent, from 751 to 2,000 pupils; 8.9 per cent, more than 2,000 pupils; 3.6 per cent failed to specify their enrolments. The median enrolments were 950 in the junior high schools, 1,125 in the senior high schools, 260 in the four-year high schools, and 325 in the six-year high schools. The median enrolment of the entire group of schools was 600.

EXTENT OF PARTICIPATION

One hundred and fifty-eight, or 70.5 per cent of the whole number of schools studied, participated in interscholastic non-athletic contests, tournaments, and meets during the school year 1929-30, for which the data of the investigation were collected. The distributions of the schools in the different groups according to the percentages participating and not participating are shown in Table I. The range in the percentages of the schools in the various geographical divisions participating in these activities is slight (only 5.2). The ranges in the percentages of participation are greater when the schools are classified according to type of organization and according to enrolment. All senior high schools participated in such activities, whereas only two-fifths of the junior high schools and approximately three-fourths of the four-year and six-year high schools participated. In the enrolment groups the percentages of schools participating ranges from 61.1 per cent for schools with enrolments of 751-2,000 to 85.2 per cent for schools with enrolments of 100 and fewer. The low percentages of participation for the schools with enrolments of 301-2,000 are explained by the fact that most of the junior high schools, in which the percentages of participation were lowest, fall within these enrolment limits.

Contests.—The number of pupils practicing for participation in interscholastic contests, exclusive of tournaments and meets, in the 158 schools sponsoring such contests and the number actually participating during the school year 1929-30 are shown in Table II. Practice was held for 575 contests in the thirty-two activities re-

ported, or an average of 3.6 contests to a school; 467 contests were participated in, or an average of approximately three contests to a school. A total of 30,782 pupils, almost a third of the total enrolment of the schools, practiced for competition in the various contests, and 10,202 pupils, approximately 10 per cent of the total enrolment, actually participated in the contests.

TABLE I

PERCENTAGES OF SCHOOLS IN DIFFERENT GROUPS PARTICIPATING AND NOT PARTICIPATING IN INTERSCHOLASTIC NON-ATHLETIC CONTESTS, TOURNAMENTS, AND MEETS DURING THE SCHOOL YEAR 1929-30

Groups	Percentage of Schools Participating	Percentage of Schools Not Participating
Geographical divisions:		
New England.....	72.7	27.3
Middle Atlantic states.....	67.5	32.5
Southern states.....	72.5	27.5
Middle western states.....	70.3	29.7
Western states.....	71.0	29.0
Types of organization:		
Junior high schools.....	40.6	59.4
Senior high schools.....	100.0	0.0
Six-year high schools.....	75.8	24.2
Four-year high schools.....	77.5	22.5
Enrolment groups:		
100 and fewer.....	85.2	14.8
101-300.....	75.0	25.0
301-750.....	63.3	36.7
751-2,000.....	61.1	38.9
Over 2,000.....	80.0	20.0
All schools.....	70.5	29.5

The activities providing practice for the largest number of pupils were health clubs, glee clubs, publications, choruses, and oratory. The activities permitting the largest number of pupils to participate in contests were glee clubs, publications, choruses, scholarship contests, and bands. When both practice and participation are considered, the ten activities offering the benefits of participation to the largest number of pupils were, in order of frequency, health clubs, glee clubs, publications, choruses, scholarship contests, oratory, bands, debates, spelling contests, and essay contests. The activities providing the least participation in practice and contests were chem-

istry contests, stock-judging, musical readings, dramatics, 4-H contests, small instrument ensembles, stenography, commercial contests, typewriting, and manual arts.

TABLE II

NUMBER OF INTERSCHOLASTIC NON-ATHLETIC CONTESTS, EXCLUSIVE OF TOURNAMENTS AND MEETS, SPONSORED BY 158 SCHOOLS AND NUMBER OF PUPILS PRACTICING FOR, AND PARTICIPATING IN, THESE CONTESTS DURING THE SCHOOL YEAR 1929-30

TYPE OF CONTEST	PRACTICED FOR CONTESTS		PARTICIPATED IN CONTESTS	
	Number of Contests	Number of Pupils	Number of Contests	Number of Pupils
Glee club.....	44	2,652	33	1,613
Publications.....	38	2,087	31	1,068
Chorus.....	25	2,051	18	1,068
Scholarship.....	26	1,966	23	927
Band.....	38	1,547	27	862
Debate.....	69	1,360	64	708
Orchestra.....	30	1,117	21	678
Oratory.....	64	2,046	58	629
Art.....	27	981	14	503
Exhibits.....	18	1,362	13	375
Declamation.....	45	1,329	40	305
Dramatic reading.....	25	426	22	282
Play day.....	1	270	1	270
Vocal solo.....	33	350	28	164
Essays.....	5	1,789	3	131
Small vocal ensemble.....	15	212	14	125
R.O.T.C.....	1	90	1	90
Instrument solo.....	30	305	23	73
Extempore speaking.....	20	263	16	50
Spelling.....	3	1,918	3	40
Health clubs.....	2	5,938	1	20
Typewriting.....	1	30	1	17
Commercial subjects.....	2	26	1	15
Stenography.....	1	20	1	15
4-H activities.....	1	20	1	12
Small instrument ensemble.....	4	23	3	9
Stock-judging.....	1	9	1	9
Musical reading.....	2	18	2	8
Dramatics.....	1	18	1	8
Chemistry.....	1	9	1	6
Marbles.....	1	500	1	2
Manual arts.....	1	50	0	0
Total.....	575	30,782	467	10,202

Tournaments and meets.—Six hundred and nineteen interscholastic non-athletic tournaments and meets were participated in by the pupils in the 158 schools during the year 1929-30. The largest number

of competitions (319) were of the intercity type; 194 competitions were sponsored by state associations; 104 were intracity contests; and only two were nationally sponsored.

The number of pupils participating in the 619 tournaments and meets is shown in Table III. The intracity competitions provided

TABLE III
NUMBER OF PUPILS PARTICIPATING IN 619 INTERSCHOLASTIC NON-ATHLETIC
TOURNAMENTS AND MEETS OF VARIOUS TYPES DURING
THE SCHOOL YEAR 1929-30

TYPE OF CONTEST	NATIONAL TOURNAMENTS	INTRACITY TOURNAMENTS	INTERCITY TOURNAMENTS								TOTAL
			Privately Sponsored		Sponsored by Colleges and Universities		Sponsored by State Associations		Sponsored by County		
			District	State	District	State	District	State			
Glee club.....	0	345	158	0	177	52	351	198	188	1,469	
Band.....	0	325	45	110	25	35	181	87	0	808	
Chorus.....	0	250	186	0	33	32	40	24	134	699	
Exhibits.....	0	212	3	1	1	25	2	200	220	664	
Orchestra.....	0	80	70	50	0	0	126	234	14	574	
Publications.....	0	259	50	50	46	76	47	44	1	573	
Debate.....	0	120	49	2	34	38	110	13	12	387	
Scholarship.....	0	107	20	0	68	18	41	3	38	355	
Oratory.....	0	47	50	31	16	3	22	6	16	191	
Instrument solo.....	0	24	33	2	33	13	43	9	16	173	
Small vocal ensemble.....	0	15	9	0	17	8	44	20	44	157	
Declamation.....	0	44	15	3	8	4	49	3	23	149	
Latin tournaments.....	0	0	0	0	0	0	125	0	0	125	
Vocal solo.....	0	33	12	0	11	5	23	5	20	109	
Dramatic reading.....	0	12	4	5	4	5	34	2	30	96	
Art.....	20	37	0	0	0	3	29	0	0	89	
Musical reading.....	0	0	0	0	0	0	20	16	20	56	
Extempore speaking.....	0	11	3	0	16	2	9	0	3	44	
Essays.....	0	21	0	1	1	1	3	1	6	34	
Typewriting.....	0	15	0	0	0	0	0	4	10	29	
Small instrument ensemble.....	0	4	14	0	0	0	3	4	0	25	
Spelling.....	0	2	2	1	0	0	0	0	17	22	
Stock-judging.....	0	0	0	6	3	10	0	0	0	19	
Stenography.....	0	15	0	0	0	0	0	0	0	15	
Dramatics.....	0	8	0	0	0	0	0	0	0	8	
Vocational demonstration.....	0	0	0	3	0	0	0	0	0	3	
Musical contest.....	1	0	0	0	0	0	0	0	0	1	
Commercial subjects.....	0	0	0	0	1	0	0	0	0	1	
Total.....	21	2,055	723	265	494	330	1,302	873	812	6,875	

participation for the largest number of pupils; the national competitions, the lowest number. The percentage of the total number of pupils participating in the interscholastic tournaments and meets was 7.25.

Total extent of participation.—When the number of pupils practic-

ing for contests is combined with the number participating in contests, tournaments, and meets, it is found that a total of 47,859 pupils were provided participation through such activities, or nearly a half of the pupils enrolled in the schools studied.

Data are not available in published form to make possible a comparison of the participation provided through interscholastic and intramural athletics with that provided by interscholastic non-athletic activities. The findings reported by Brammell¹ for 327 schools with outstanding athletic practices indicate that the percentage of pupils participating in all athletic activities combined is much lower than the percentage participating in non-athletic activities in the 224 schools considered in this study. Brammell found that the ratio of the number of pupils participating in the intramural athletics to the number practicing for interscholastic activities was approximately 3 to 1. In the interscholastic non-athletic activities the ratio of the number of pupils practicing for competitions to those actually participating in contests, tournaments, and meets is approximately 3 to 2.

MEMBERSHIP IN INTERSCHOLASTIC ASSOCIATIONS

About half of the 224 schools held membership in associations or leagues designed to sponsor contests in interscholastic non-athletic activities in secondary schools. Based on the number of schools in each classification furnishing information on this point, the schools which led in holding such memberships were found in the middle western states (62.5 per cent), the southern states (62.1 per cent), the six-year high schools (60.0 per cent), and the schools enrolling 101-300 pupils (66.7 per cent). Schools in New England (6.3 per cent), and the Middle Atlantic states (37.0 per cent), the junior high schools (23.1 per cent), and the large schools with enrolments of more than 2,000 (37.5 per cent) were lowest in the percentages holding membership in interscholastic associations.

In 56 per cent of the junior-senior, or undivided five- or six-year secondary schools, the pupils of the junior high school grades were allowed to participate in interscholastic contests; in 24 per cent of

¹ P. Roy Brammell, "Looking Ahead in Secondary-School Athletics," *School Review*, XL (December, 1932), 735-50.

these schools the pupils were not allowed to participate. Twenty per cent of the schools did not report their practices. In a few schools (4.0 per cent) pupils of the ninth grade were allowed to participate, but pupils in the seventh and eighth grades were not allowed to enter these contests.

The advantage usually claimed for membership in an interscholastic association or league was that uniform requirements for participation were exacted of all schools. Authorities in about a fifth of the schools (19.6 per cent), however, went beyond the general requirements of associations and added local requirements of a specific character. The additional requirements in these schools were permission of parents, citizenship qualities, one year of residence, preliminary tryouts, and additional scholarship requirements.

SCHOLARSHIP STANDARDS REQUIRED FOR PARTICIPATION

In 71 per cent of the schools participants in interscholastic contests, tournaments, and meets must maintain certain scholarship standards. A wide range in the percentages of schools in the different groups which maintained scholarship standards was found; the percentages, based on the number of schools in each classification furnishing the information, varied from 30.8 in the case of the junior high schools to 81.6 in the case of the senior high schools. The standards most frequently maintained in the schools were that participants must have passing marks in three subjects at the time of the contest (34.0 per cent) and that participants must have passing marks in three subjects for the preceding semester and also at the date of contests (34.0 per cent). One-eighth of the schools required participants to have passing marks in four subjects at the date of the contest, and a smaller proportion (8.9 per cent) required the contestants to pass in three or four subjects during the preceding semester and in four at the date of the contest. A small number of schools observed other practices, such as maintaining the same requirements as those maintained for participation in interscholastic athletics, passing marks in two-thirds of the work carried, and passing marks in fourteen hours of work. In some schools the requirements varied with the activities.

Approximately a fifth of the schools (20.9 per cent) in the different

groups imposed restrictions on contestants, such as age, deportment, school citizenship, and a maximum number of activities in which an individual might participate in one school year. About half the schools (51.9 per cent) did not limit participation in contests by means other than the scholastic requirements. Over one-fourth of the schools (27.2 per cent) did not furnish information on this point. The failure to furnish the data probably means that these schools did not impose requirements other than scholastic standards on pupils participating in these contests.

The schools which had additional requirements for participation in contests are fairly evenly distributed through the different school groups with the single exception of the Middle Atlantic division, in which all schools either had no restrictions other than scholastic standards or did not specify their practices. The greatest percentages of schools (based on the number in each group which furnished information on this point) with additional restrictions for participation were found in the middle western states (32.8 per cent) and in the group of schools enrolling more than 2,000 pupils (31.3 per cent).

SPECIAL COACHING FOR PARTICIPANTS

Most of the schools (87.3 per cent) provided special coaching for pupils participating in interscholastic non-athletic contests. Coaching was employed by all the six-year schools. It was resorted to least in the junior high schools, the percentage of these schools (based on the number supplying the information) which furnished special coaching being 57.7.

In a few schools (2.5 per cent) the coach was secured from outside the faculty. The largest percentages of these schools were found in New England and in the small schools enrolling 100 pupils and fewer. The dominant practice appears to favor selection of coaches from the instructors in the subjects or the curriculum most closely related to the activities in which the interscholastic contests were held (55.1 per cent of the schools).

In an eighth of the schools the sponsors of activities closely related to the activities in which contests were held were assigned to coach the participants. The junior high schools led all the school groups in the use of this plan with a percentage of 33.3. Of the other school

groups the Middle Atlantic and the New England divisions and the schools with enrolments of 301-750 pupils gave most favor to this practice, the percentages (based on the number of schools in each classification furnishing data on this point) being 29.2, 21.4, and 21.7, respectively. The senior high schools, the schools with enrolments of 101-300 pupils, and schools in the southern states favored this practice the least, the percentages being 5.9, 6.3, and 6.9. Approximately a fourth of the schools (27.3 per cent) combined the practices of selecting coaches for activities from instructors in related subject-matter fields and choosing sponsors in related extra-curriculum clubs.

Two methods of selecting the participants for the contests were found to obtain in 82.3 per cent of the schools, namely, selecting contestants on the basis of ability demonstrated in classroom work (34.8 per cent) and selecting participants on the basis of special ability in the activity regardless of registration or membership in classes or subjects closely related to the activity (47.5 per cent). Only one group of schools (schools in the middle western states), as indicated by large proportions, favored the first plan, and in one group (the schools with enrolments of 101-300 pupils) the two plans were regarded with equal favor. A few schools either combined the two plans (3.8 per cent) or followed some other plan (1.9 per cent). Twelve per cent of the schools participating in contests failed to specify their methods of selecting participants.

FINANCIAL SUPPORT

The data presented in Table IV show that 45.0 per cent of the schools in the different groups supported interscholastic non-athletic contests by one of four methods, namely, sale of tickets (17.1 per cent), the general school fund for all extra-curriculum activities (12.7 per cent), dues collected from pupils (10.8 per cent), and contribution of board of education (4.4 per cent). Slightly more than a fourth of the schools (28.0 per cent) combined two or more of the foregoing methods, and about a sixth (16.5 per cent) employed miscellaneous methods. No schools of New England nor of the western division secured support from boards of education. No schools in New England and no junior high schools secured support from general funds

for extra-curriculum activities. The schools in the New England and the Middle Atlantic divisions favored the combination of ticket sale and pupil dues to other methods; the southern states, either ticket sale or pupil dues; the middle western states, ticket sale or general fund; and the western states, ticket sale and the combination of ticket sale and pupil dues. The southern and the middle

TABLE IV
PERCENTAGES OF SCHOOLS IN DIFFERENT GROUPS SECURING FUNDS FOR
SUPPORT OF INTERSCHOLASTIC NON-ATHLETIC
CONTESTS FROM VARIOUS SOURCES

GROUPS	SOURCE OF FUNDS								No FUNDS	NOT SPEC- IFIED	MIS- CEL- LANE- OUS
	Board of Edu- ca- tion	Ticket Sale	Pupil Dues	Gen- eral Fund	Board of Edu- cation and Ticket Sale	Ticket Sale and Pupil Dues	Ticket Sale and Gen- eral Fund	Ticket Sale, Pupil Dues, and Gen- eral Fund			
Geographical divisions:											
New England.....	0.0	12.5	12.5	0.0	0.0	31.3	0.0	12.5	12.5	6.3	12.6
Middle Atlantic states.....	3.7	14.8	3.7	11.1	0.0	22.2	0.0	7.4	0.0	11.1	25.9
Southern states.....	10.3	17.2	17.2	10.3	3.5	10.3	3.5	3.5	3.5	0.0	20.9
Middle western states.....	4.7	18.8	12.5	17.2	10.9	7.8	4.7	1.6	4.7	9.4	7.9
Western states.....	0.0	18.2	4.6	13.6	0.0	18.2	4.6	9.1	0.0	4.6	27.4
Types of organization:											
Junior high schools.....	11.5	21.1	11.5	0.0	3.0	3.0	0.0	7.7	7.7	15.4	15.6
Senior high schools.....	2.6	18.4	2.6	15.8	5.3	23.7	2.6	2.6	0.0	10.5	15.7
Six-year high schools.....	4.0	8.0	8.0	28.0	8.0	12.0	0.0	4.0	4.0	0.0	24.0
Four-year high schools.....	2.0	17.4	15.9	10.1	4.4	14.5	5.8	5.8	4.4	4.4	14.8
Enrolment groups:											
100 and fewer.....	4.4	26.1	17.4	13.0	8.7	4.4	8.7	4.4	0.0	0.0	13.2
101-300.....	2.8	11.1	11.1	11.1	11.1	16.7	2.8	5.6	0.0	2.8	25.2
301-750.....	3.2	19.4	6.5	12.9	3.2	3.2	3.2	3.2	9.7	3.2	32.1
751-2,000.....	4.6	18.2	9.1	13.6	2.3	22.7	2.3	6.8	2.3	11.4	6.0
Over 2,000.....	6.3	12.5	6.3	12.5	0.0	25.0	0.0	6.3	12.5	18.8	0.0
All schools.....	4.4	17.1	10.8	12.7	5.1	14.6	3.2	5.1	3.8	7.0	16.5

western states showed the greatest variations in the methods used to finance the interscholastic contests. The modal practice for supporting interscholastic activities in the junior high schools, four-year high schools, schools with enrolments of 100 pupils and fewer, and schools with enrolments of 301-750 pupils is sale of tickets; in the senior high schools and in schools with enrolments of 101-300 pupils, 751-2,000 pupils, and more than 2,000 pupils, sale of tickets and pupil dues combined; and in the six-year high schools, the general fund for all extra-curriculum activities. The data revealed no single outstanding practice in the support of interscholastic non-

athletic contests, although the sale of tickets, pupil dues, and the combination of these two plans were nearly as extensively used as all the other plans combined.

The officer in direct control of the financing of the interscholastic non-athletic contests was the principal in almost a third of the schools (30.4 per cent). Other officers were utilized with varying degrees of frequency in most of the school groups. The schools with enrolments of 301-750 pupils favored control through a general treasurer for all activities; the schools in the Middle Atlantic division, control through the school treasurer. The schools with enrolments of 101-300 pupils most frequently controlled the finances through faculty committees; the schools with enrolments of 301-750, through faculty-pupil committees. The New England division led all groups in the use of miscellaneous practices. A small proportion of the schools (3.8 per cent) had no funds for promoting interscholastic contests, and a small number (7.6 per cent) failed to specify practices.

In accounting for funds used in the support of interscholastic non-athletic activities, 65.2 per cent of the schools followed the practice of auditing the funds regularly, and 17.1 per cent did not audit the funds regularly. Three and eight-tenths per cent of the schools reported no funds, 1.3 per cent reported that each pupil defrayed his own expenses, and 12.7 per cent did not specify a practice. Regular auditing of funds was most frequently found in the schools of the southern states, in the six-year high schools, and in the small schools enrolling 100 pupils and fewer. The practice of regular auditing was least observed in the schools in the Middle Atlantic division, in the junior high schools, and in the large schools with enrolments in excess of 2,000 pupils.

APPRAISAL

The findings of this study reveal many opportunities for pupil practice and participation in a great variety of interscholastic non-athletic activities in secondary schools. If the amount of participation provided is a valid criterion for evaluating the relative worth of extra-curriculum activities, the data presented in this investigation show that administrative officers have a large problem before

them in the development of school opinion and financial support of interscholastic non-athletic activities. Most of the schools returning the inquiry form (70.5 per cent) have realized the opportunities for pupil development through participation in interscholastic contests, tournaments, and meets of the non-athletic type. In these schools approximately half of the total enrolment practiced for, or participated in, contests, tournaments, and meets during the school year 1929-30.

The following factual findings indicate that officers of administration in secondary schools have recognized the value of interscholastic non-athletic activities to the pupils. (1) About half the schools studied held membership in associations and leagues designed to sponsor and encourage participation in such activities. (2) Standards for participation similar to those required by athletic associations were maintained in 71 per cent of the schools. (3) A third of the schools imposed additional restrictions on pupils who participated in interscholastic competitions. (4) Almost 90 per cent of the schools engaging in interscholastic non-athletic competitions provided special coaching for participants.

The greatest weakness revealed by the investigation in the organization and administration of the interscholastic non-athletic activities consists in the character and the method of financial support. Variations in the practices of providing and regulating the financing of such activities are marked and indicate lack of understanding and appreciation of the problems involved. Until adequate financial support is provided and efficient methods of managing the finances are developed, the non-athletic activities can scarcely be expected to compete on favorable terms with the athletic activities.

ENGLISH SECONDARY EDUCATION

W. C. RUEDIGER
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Difficulty of understanding English secondary education.—My desire to visit secondary schools in England arose from the fact that this phase of English education was especially vague in my mind. To the foreigner the literature on English secondary schools is confusing. I had long known, of course, of the "great public schools"—Winchester, Eton, Saint Paul's, Westminster, Harrow, Charterhouse, Rugby, Shrewsbury, and Merchant Taylors'—but obviously these nine do not supply all the secondary education in England. What other schools are there, how are they supported, and what are their curriculums?

Private and group initiative plays a larger part in the establishment of schools in England than in America, but this initiative manifests itself primarily in different methods of support rather than in differences in curriculums. It is this variety in support that accounts, in part, for the apparent confusion in English secondary education. In recent years, however, public control and at least partial public support have gained over private control of secondary education by a wide margin. In London more than one hundred secondary schools, enrolling approximately forty-five thousand pupils, are now under public control.

A comparison of these figures with corresponding data for American schools is difficult, for there are no corresponding conditions. The London secondary school covers the age range of approximately our junior and senior high schools, but it enrolls only "the cream" of the pupils. The remaining pupils may attend private preparatory and secondary schools, technical schools, central schools, and higher elementary schools. Compulsory attendance ends at fourteen years of age.

The London County Council manages public education for about 4,500,000 persons. The five basic boroughs of New York City com-

prise a population of about 5,600,000. In New York City in 1929-30, 106,656 pupils were enrolled in junior high schools and 173,226 in senior and regular high schools, a total of 279,882.

Instruction and equipment.—The first secondary school that I visited in London was the Highbury County School. I had a conference with the head master, R. J. Marsh, and visited classes in physics, third-year French, and physical education.

The physics class was doing laboratory work in mechanics, and the work proceeded much as similar work proceeds in the high schools of this country. Indeed, with the exception of foreign-language instruction, secondary-school teaching in England and America are much alike. A class in European history that I visited in the Wandsworth School was using an American textbook, and the teacher used a combination of the lecture and the discussion methods, just as an efficient teacher does in this country. In the schools which I visited, the laboratories in physics and chemistry were well equipped, but this statement is less true in the case of biological science, which appears to be receiving but meager attention.

The instruction in foreign languages given by the English teachers is of outstanding quality. The teachers of the two French and the two German classes that I visited were using the direct method, and the pupils were making splendid progress in language control. In a class in German which had been receiving instruction for only six weeks, the pupils surprised me by the readiness with which they understood spoken German. The direct method prevails in both secondary and central schools. The masters in the schools of these two types impressed me as being about equally competent. All teachers of foreign languages whom I met had spent sufficient time on the Continent to become familiar with the languages concerned. Without such familiarity, they could not hope to secure a position to teach a foreign language.

The nature of the offering.—The curriculum of the Wandsworth School is described as follows in its prospectus:

The curriculum is that of a first-grade Public Secondary School for boys between ten and nineteen years of age, under the regulations of the Board of Education.

It is planned on broad lines, providing a General Course up to the age of sixteen or seventeen, and an Advanced Course above that age.

The General Course provides a good sound education up to the standard of the General School (Matriculation) Examination of the University of London, which should be taken about the age of sixteen. The subjects included are:

Scripture ¹	Chemistry
English Grammar	French
Composition and Literature	German or Latin
History	Drawing
Geography	Physical Drill
Elementary Mathematics	Woodwork
Physics	Singing and Orchestral Music

In the Advanced Courses pupils are prepared for the Higher School Examination of the University and for the Intermediate Examinations in Arts, Science, Engineering and Commerce, for University Scholarships, and for posts in the Civil Service and the London County Council. In these courses pupils continue their studies in selected subjects from the above list and in Economics, Economic History and Geography, or Engineering Drawing and Design, according to individual requirements.

The subjects of the general curriculum in the Highbury County School are listed as follows:

Scripture ¹	Physics
English Language and Literature	Chemistry
History	Nature-Study
Geography	Art
French	Woodworking and Cardboard-modeling
Latin	Singing
Mathematics	Physical Exercises

No advanced courses are listed in the prospectus of the Highbury County School, but some of the boys stay on for advanced work. The number, however, is surprisingly small, being barely 10 per cent of those who pass the general school examination. This percentage holds for all London secondary schools under public control. It was only slightly higher at Harrow, which I also visited.

Boys are still admitted to the universities after passing the general school, or matriculation, examination; and apparently only those who are working for scholarships, those who want to curtail expenses by taking a year or two of advanced work near home, or those who are preparing for external degrees from the University of London stay for advanced work. This advanced work, as is indicated by the

¹ Exemption granted at request of parent.

quotation from the prospectus of the Wandsworth School, is highly specialized.

An inspection of the general curriculums of the Highbury and of the Wandsworth schools reveals a strikingly close similarity. This similarity holds for all the secondary schools of England, including even the "great public schools." The general curriculum of Harrow varies little from that of the Wandsworth School or from that of any other secondary school for boys. This similarity is explained in part by the fact that the curriculum represents about all there is for an academic secondary school to teach and in part by the fact that this curriculum achieves recognition of the school by the Board of Education as an efficient secondary school. The Board of Education (a national body) here has an influence similar to that of our regional accrediting associations.

In England technical and vocational curriculums are not offered in "secondary schools" but are given in special schools. Yet many secondary schools, including again some of the "great public schools," offer to boys over sixteen courses leading to commercial employment.

Tuition.—The tuition fees in London secondary schools under public control are not identical. They vary from £4, 10s., to about £16 a year. In the three schools I visited they were as follows:

	Boys under Twelve Years	Boys of Twelve Years and Over
Highbury County School.....	£ 9	£10
Wandsworth School.....	£10, 10s.	£10, 10s.
Streatham School.....	£12, 12s.	£15, 15s.

The prospectus of the Wandsworth School states: "In cases where two or more brothers are fee-paying pupils at the same time, the fee for each brother after the first is £7 per annum." The fee for non-resident pupils is uniformly £43 a year. The prospectus of the Highbury County School states that these fees include the use of books and stationery and admission to the interschool games.

Not all pupils pay their own tuition; from 25 to 40 per cent are enrolled on scholarships. The London County Council provides about twenty thousand scholarships of various sorts, most of which are usable in secondary schools. It is these scholarships, and others

granted by private agencies, that bring about a scramble for examinations in the elementary schools and in the lower years of the secondary schools (a pupil may win a scholarship even after he has been admitted to a secondary school). When the parental income falls below £250 a year, the county scholarships provide not only free tuition but also a maintenance grant up to £21 a year. When the parental income exceeds £450 a year, no free places are provided at county expense.

In the county [London] secondary schools the gross cost of education for each pupil is £39; the fees in these schools average one-third of the cost; the balance is met by the Board of Education [national] and the Council [local] in equal shares.

It is not generally known, or appreciated, that a fee-paying pupil in a secondary school costs the public twice as much as a child educated free in an elementary school and about the same as a child educated free in a central school.¹

The school calendar.—London elementary schools are in session forty-four weeks during the year, but the central authorities require the secondary schools to be in session only thirty-nine weeks. This period is usually divided into three terms of thirteen weeks each. The management of internal affairs rests entirely with the staff, which meets frequently. All the head masters with whom I talked assured me that they were as free to manage and develop their schools as were the head masters in private schools. Even the central authorities did not know when the various secondary schools were taking their spring vacations nor how long these vacations would be. When I wished to visit a certain school, they had to call up and find out when it would be in session. The various schools need not, and often do not, take their vacations at the same time.

Examinations.—The pupil's goal in an English secondary school is not graduation but the passing of an examination. This examination is given, not by the school but by some outside agency, usually a university. The basic examination is the general school examination, which is about as difficult as a college-entrance examination in America. With respect to this examination the prospectus of the Highbury County School says:

¹ *The London Education Service*, p. 85. *The Organisation of Education in London* (eighth edition). London, England: London County Council, Education Committee, 1927.

The course of instruction is so arranged that boys may take the General School Examination of the University of London about the age of sixteen. Five passes with credit in specified subjects entitle successful candidates to a Matriculation Certificate.

The Certificate of the General School Examination is accepted by the Board of Education as a qualification for admission to a Training College, and also by various Professional Bodies in lieu of their own entrance examinations. As it is also essential for entrance to many Banks and Insurance Offices and good Business Houses, every boy should endeavor to obtain it before he leaves the school.

That is, the certificate serves as a badge of mental competency and consequently has a selective influence.

The size of the schools.—The enrolments in the secondary schools of London average about 425 pupils each. No school enrolls as many as 1,000 pupils, although one exceeds 900. The enrolment aimed at is 450. When the enrolment exceeds that figure, the English head master feels that the personal touch, which he considers vital to the educative process, is being lost. Every head master considers it essential to know every one of his pupils personally and by name. Counseling is continuous and friendly, and a delightful spirit of comradeship between masters and pupils prevailed in all the schools which I visited, including also the central schools and the elementary schools.

Social relations and the personal touch are given exceptional recognition in English education. The limits of enrolment in the colleges of Cambridge and Oxford are set, not by the classrooms, but by the size of the dining halls. All the students of a college must dine together at least once a day, although in most of the colleges the dinner must now be served to two shifts. A student may live at home and may eat breakfast and luncheon there, but he must dine at the college.

All the secondary schools have spacious and well-appointed dining halls, and all pupils who do not go home for the midday meal must eat there. Pupils may bring their dinners from home; they then have their food warmed and pay a small fee, one or two pence, for service, linen, and dishes. The others are given a wholesome meal, consisting of meat, two vegetables, bread, butter, milk or tea, and dessert, for about nine pence. In the central schools such a meal costs only seven pence. A penny is worth approximately two cents in our money.

The central schools.—While not regarded in England as secondary schools, the central schools, of which there are now about one hundred in London, deserve mention here from the American standpoint. They cover four years of work after the age of eleven and consequently correspond closely to our junior high schools. During the first two years all pupils follow an identical curriculum, which is similar to that of a secondary school, including even a modern foreign language. During the last two years the training takes on either a commercial or a technical bias. Its goal is to prepare the pupils for occupations.

The curriculum of the Stanley Central School for Boys, a school with a technical bias, covers:

Scripture (optional)	Physics
English	Chemistry
German	Drawing and art
Geography	Woodwork and metal-work
History	Music
Mathematics	Physical training

In visiting classes, one gains the impression that the work is more like that of our senior high schools than like that of our junior high schools. Tuition is free, and, as not nearly all who would like to attend can be accommodated, competition for places is keen. Selection is based on the results of the junior county scholarship examinations given to eleven-year-old children. Those who fail to win places in secondary schools may gain consideration for places in central schools. In London parlance, there is a double "skimming of the cream." Examinations may again be taken at the age of thirteen years.

Pupils who fail to win places in either a secondary or a central school must attend a higher elementary school until the end of the term in which they reach the age of fourteen. The work in the one school of this type that I visited consisted mainly of manual activities. Perhaps the double-skimming process has something to do with the type of work offered.

The central schools are, in appearance and spirit, secondary schools. The pupils are treated like young men and young women, and all the masters and mistresses are specialists. These masters and

mistresses impressed me as being quite equal in ability to the masters and the mistresses in secondary schools. Their salaries are only slightly lower.

As yet there are no leaving examinations for the central-school pupils. The authorities appear to feel that none are necessary, but not so the pupils, parents, and employers. All these are pressing for examinations. The English student can no more feel that he has arrived anywhere educationally without having passed a standard comprehensive examination than the American can feel so without having been graduated. Employers are looking also for an index of competency.

Coeducation.—In London, except in some of the elementary schools, coeducation is rare, but it is becoming common in some other parts of England. In about half the counties mixed schools are outstripping the unmixed schools in numbers. These mixed schools were started largely as a matter of financial convenience, but they have amply justified themselves on educational grounds. Indeed, many English educators look on coeducation as a distinct step forward.

The London County Council provides for the secondary education of girls quite as generously as for that of boys. In 1926 there were slightly over 20,000 places for boys and 22,000 for girls.

Salaries.—The salary schedule in one of the secondary schools I visited was as follows (and I have reason to believe that it is the same in others):

TEACHERS HOLDING DEGREES

Men: £276-528; increment, £15 a year for 18 years

Women: £264-420; increment, £12 a year for 14 years

TEACHERS WITHOUT DEGREES

(Teachers of art, physical education, etc.)

Men: £204-432; increment, £12 a year for 20 years

Women: £192-342; increment, £9 a year for 18 years

This schedule is now subject to a reduction of 10 per cent. Since the pound buys as much in England now as it did before the country went off the gold standard, it is fair, for comparison with American salaries, to equate these figures into dollars at par.

Between the ages of sixty and sixty-five the secondary-school teacher retires on about half pay.

ANALYSIS TECHNIQUES IN CURRICULUM-MAKING

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During the past five years there has been carried on in the field of curriculum-making a vast deal of what might by courtesy be called "experimentation" but which is more accurately designated "trial-and-error procedure." Out of this welter of more or less organized and systematically conducted efforts to arrive at a selection and arrangement of functional rather than formal material for high-school courses and curriculums, there have emerged a clarification of techniques to be used in selecting such material and a development of criteria by which to select the appropriate techniques. It would seem worth while, therefore, that an inventory of the results so far obtained be made and that a summary of these techniques and criteria be presented.

The long-established "scissors-and-pastepot" technique of making courses and curriculums still continues to be used in many quarters, but it is fast losing ground to the analysis forms of techniques. There still continues to be a dearth of attempts to develop experimental techniques by which to test the validity and the reliability of courses after they have been constructed according to the analysis techniques. Because these analysis techniques—"job analysis," "activity analysis," "functional analysis," and "content analysis"—are more or less in general use and because even yet considerable confusion exists about the distinctions between these techniques and about the steps to be followed in the use of each, an attempt to summarize the results of efforts to use the several techniques may help to clarify thought and practice in curriculum construction. A discussion of the general theory and a description of these analysis techniques may be found in an earlier publication.¹ The present article is concerned with a clarification of these techniques, of the distinctions between them, and of what experience has taught are some

¹ L. A. Williams, *The Making of High-School Curricula*. Boston: Ginn & Co., 1928.

of the criteria according to which one technique rather than any of the others will be or should be selected. For convenience in use by curriculum-makers, the discussion of these matters and the summary of inferences concerning these techniques are presented in outline form. These inferences are drawn from experiences in scattered portions of the United States as gathered from reports of local programs of curriculum revision and from published revised courses.

THE TECHNIQUE OF JOB ANALYSIS

I. Criteria by which to decide when job analysis should be used in curriculum-making.

1. When the material element is static, inert.
2. When the methods to be used are fixed.
3. When the purposes (objectives) are clearly defined, concrete, and exact.
4. When the "marginal responsibilities" are few and relatively simple.

II. Steps to follow in using job analysis.

1. Make a list of all the jobs that a worker will have to do as a skilled workman in the field selected at the level to be attained.
2. Arrange the jobs in this list in units, or blocks, each of which calls for similar kinds of (a) skill, (b) knowledge, (c) tools, and (d) materials.
3. Determine exactly what required information is needed for each job. This required knowledge is to be classified as—
 - a) Technical information: mathematics, science, drawing, etc.
 - b) Auxiliary information: trade terms, care and use of tools, safety precautions, knowledge of stock, etc.
4. Determine the progression factors for each unit; for example, degree of accuracy required, degree of skill required, degree of trade judgment required, hazards producing fear in worker.
5. Determine the number and the place of checking levels for each unit.
6. Determine the type-job specifications; that is, determine what type of job the learner can do at each checking level by stating the characteristics, or specifications, of each job within each checking level.
7. From these type-job specifications determine exactly what the learner must do and must know at the end of any unit. These are the unit objectives.
8. Determine exactly what the learner must do and must know at each checking level. These are the checking-level (or intermediate) objectives.
9. Arrange the jobs within each unit in instructional order (which is not, by any means, always the production order). The criterion is difficulty of mastery by the learner.
10. Prepare job sheets for instructors.

III. Techniques to be employed in making a job analysis.

1. Appeal to authority.
 - a) Lay opinion.
 - (1) Individual judgment.
 - (2) Personal interview.
 - (3) Questionnaire.
 - b) Expert opinion (accredited jury).
 - (1) Interview.
 - (2) Questionnaire.
 - (3) Diary records made by workers on the job.
2. Observation with inferences.
 - a) Workers observed and records of the activities kept.
 - b) Motion picture made of workmen on the job.
 - c) Investigator working on job and observing self.
 - d) Inferences drawn by investigator working on the job.

IV. Terms to be understood in making a job analysis.

1. "Blocking the trade."
2. "Progression factors."
3. "Checking levels."
4. "Type jobs."
5. "Type-job specifications."
6. "Unit objectives."
7. "Job sheets."

THE TECHNIQUE OF ACTIVITY ANALYSIS

I. Criteria by which to decide when activity analysis should be used in curriculum-making.

1. When the purpose is *preparatory* rather than *functional*.
2. When plenty of time is available.
3. When a large sum of money is available.
4. When trained experts to direct the procedure are available.
5. When a reasonably complete classified tabulation of desired human activities is available.

II. Steps to follow in using activity analysis.

1. Analyze the broad range of human experience into major fields. (Bobbitt gives ten.¹)
2. Analyze each of these major fields into their more specific activities. (Bobbitt lists 821 "abilities" as general categories under which to list specific "activities," these excluding the objective of "Occupational Activities."²)

¹ Franklin Bobbitt, *How To Make a Curriculum*, pp. 8-9. Boston: Houghton Mifflin Co., 1924.

² *Ibid.*, pp. 11-29.

3. Divide these activities into two lists.
 - a) Those which will be learned through general social experiences.
 - b) Those which will not be learned through general social experiences.
(These are the activities which must be taught in school.)
 4. Arrange these as "grade objectives" or "progress objectives."
 5. Determine what pupils must *do* to realize these grade objectives.
(These *activities* are the curriculum.)
- III. Techniques to be employed in making an activity analysis.
1. Appeal to authority.
 - a) Lay opinion.
 - (1) Interview.
 - (2) Questionnaire.
 - b) Expert opinion (accredited jury).
 - (1) Interview.
 - (2) Questionnaire.
 - (3) Tabulation of opinions found in printed material.
 2. Observation with inferences.
 - a) Individual and group observation and record of human activities.
 - b) Observation of effect of selected material in classrooms—by competent judges.
 - c) Application of *job* analysis in the occupational activities.

THE TECHNIQUE OF FUNCTIONAL ANALYSIS

- I. Criteria by which to decide when functional analysis should be used in curriculum-making.
1. When abundant time is available.
 2. When a considerable fund of money is available.
 3. When many persons can co-operate.
 4. When the maker or group of makers can be trained in the technique.
 5. When a curriculum or course is to be constructed *de novo*.
- II. Steps to follow in using functional analysis.
1. Determine and list the general objectives to be attained.
 2. Parallel these objectives with a list of life-activities in which these objectives function.
 3. Determine and list the (a) duties, (b) information, (c) difficulties, and (d) traits involved in each life-activity. (Note that it is necessary to make for each life-activity a "duty analysis," an "information analysis," a "difficulty analysis," and a "traits analysis.")
 4. Collect for each objective the items under No. 3 which are involved in realization of the objective and classify as (a) knowledge, (b) skills, and (c) attitudes.
 5. Arrange these in order of (a) difficulty, (b) frequency, and (c) importance, and allocate to grades or school years.

III. Techniques to be employed in making a functional analysis.

1. Appeal to authority.
 - a) Lay opinion.
 - (1) Interview.
 - (2) Questionnaire.
 - (3) Tabulation of documentary evidence.
 - b) Expert opinion (accredited jury).
 - (1) Interview.
 - (2) Questionnaire.
 - (3) Tabulation of "recorded specifics."
2. Observation with inferences.
 - a) Individual personal records (one's own and those recorded by others).
 - b) Introspection.
 - c) Interview.
 - d) Observation on the job (diary records).
 - e) Participation in performance of the job.

IV. Terms to be understood in making a functional analysis.

1. "Ideals objectives."
2. "Activity objectives."
3. "Duty analysis."
4. "Difficulty analysis."
5. "Traits analysis."
6. "Information analysis."
7. "Recorded specifics."
8. "Unrecorded specifics."

THE TECHNIQUE OF CONTENT ANALYSIS

- I. Criteria by which to decide when content analysis should be used in curriculum-making.
 1. When a course needs *revision* rather than construction *de novo*.
 2. When funds are greatly limited.
 3. When time is an important limitation.
 4. When the staff of workers is limited in number, interest, or training.
- II. Steps to follow in using content analysis.
 1. List all the topics and subtopics of the *old* course to which as many as two and not more than four class periods were devoted.
 2. List separately opposite each such topic or subtopic the (a) facts, (b) skills, and (c) attitudes which were presented in connection with each topic or subtopic in the *old* course.
 3. Determine and list the objectives (goals, outcomes) of the proposed *new* (revised) course.
 4. List separately and opposite each objective the (a) factual knowledge, (b) skills, and (c) attitudes from No. 2 which are necessary to realize

- the objective, and then add such (a) factual knowledge, (b) skills, and (c) attitudes as are lacking and necessary to realize each objective.
5. Determine and list the learning units for the new course in the light of No. 4, and number these units in what appears to be a good instructional order.
 6. List the learning units in the instructional order thus determined, and list opposite each unit, in separate columns, the (a) factual knowledge, (b) skills, and (c) attitudes as stated in No. 4. (The result is the *revised* course.)
 7. Textbooks, supplementary materials, methods of presentation, a testing plan, etc., will then have to be decided on and the whole presented in good form for classroom use.
- III. Techniques to be employed in making a content analysis.
1. Appeal to authority (all through interview and questionnaire).
 - a) Individual personal judgment.
 - b) Lay opinion.
 - c) Expert opinion (accredited jury).
 2. Observation with inferences.
 - a) Teaching of new material in classroom.
 - b) Observing results.
 - c) Making conclusions as to the new course in the light of the observations ("expert"—teacher—opinion, or accredited jury).
- IV. Note the following characteristics of content analysis.
1. It is a reversal of functional analysis.
 2. Begin with course as set up.
 3. Break it down into its topics (structure).
 4. Break topics down into the life-activities which they serve (function).
 5. Determine other life-activities to which the course should contribute (function).
 6. Determine the topics needed to supply the knowledge, skills, and attitudes needed by these activities (structure).
 7. Arrange the *entire* list of topics (old and new) in instructional order according to—
 - a) Importance.
 - b) Frequency.
 - c) Difficulty.
 - d) Pupil status.

THE UNIT CONCEPTION OF TEACHING APPLIED TO ART

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Different kinds of teaching units.—Several different types of teaching are used in the classroom instruction of almost any subject in the school. Morrison, in his book *The Practice of Teaching in the Secondary School*,¹ classifies the different types of teaching into five fields for the development of the unit approach: (1) Subjects taught by the *science type* of procedure are mathematics, history, natural science, grammar, economics, and social sciences. (Art in relation to everyday life may be considered as a phase of the social sciences). (2) Subjects taught by the *practical-arts type* of procedure are industrial arts, manual training, cooking, sewing, and the like. (3) Subjects taught by the *appreciation type* of procedure are literature, music, and art. (4) Subjects taught by the *language-arts type* of procedure are English composition, foreign languages, and drawing. (5) Subjects taught by the *pure-practice type* of procedure are spelling and number combinations.

From this brief analysis of the different fields of teaching, one may conclude that some phases of art may be taught by units of the practical-arts type, the appreciation type, and the language-arts type and that neither the science type nor the pure-practice type would be used. However, the hypothesis to be presented in this article, and one which is not quickly appreciated by teachers of art, is that the objectives of modern education can be effectively attained by adapting art instruction to the science type of teaching. In this case, however, we are considering art from the standpoint of the social sciences, from the standpoint of its relation to training for citizenship, and from the standpoint of its contribution in meeting the problems of everyday life, not from the standpoint of the professional or the

¹ Henry C. Morrison, *The Practice of Teaching in the Secondary School*. Chicago: University of Chicago Press, 1931 (revised).

vocational needs of the student preparing for a career in the productive arts. In courses of the latter kind other types of units would be used.

Defining the unit.—A unit is any division of subject matter, large or small, that, when mastered, gives one an insight into, an appreciation of, or a mastery over, some aspect of life. Morrison gives the following suggestion with regard to procedure in the science type of teaching: "The product of learning here is a new attitude toward the world in the form of understanding. . . . The unit mastered is a step in the immediate and direct adjustment of the individual to his world."¹ In a unit in art, then, we aim to impart knowledge and understanding of art and art quality so that our pupils may intelligently use this knowledge in meeting life-needs. We also aim to develop appreciation and enjoyment of art, and we would furnish some experience in the creation and production of art to aid in making the knowledge gained and the appreciation enjoyed more valuable and comprehensive to the pupil.

A unit which would incorporate these educational factors into a well-balanced program of pupil adjustment would have as its aims the following objectives, which were discussed more at length in an earlier article.²

1. The knowledge objective
 - a) Acquiring fruitful knowledge
 - b) Development of mental techniques
2. The appreciation objective
 - a) Development of attitudes, interests, and appreciations
3. The habit and skill objective
 - a) Discovery of aptitudes and talents
 - b) Development of free expression
 - c) Development of limited skill in the use of art materials

The teaching procedure of a unit.—The teaching procedure followed in the unit technique of instruction will be considered briefly. The Morrison unit provides for a teaching cycle of five convenient steps: (1) exploration, (2) presentation, (3) assimilation, (4) organization, and (5) recitation. Each of these steps, as outlined by Morrison,

¹ Henry C. Morrison, *op. cit.* (1926), p. 171.

² William G. Whitford, "Changing Methods in Art Education," *School Review*, XLI (May, 1933), 362-69.

contributes to the learning process so that a logical and coherent order is attained in the development of the unit of instruction.

The following outline is suggested to adapt the unit procedure to art work of the social-science type.

UNIT THEME: COLOR AND ITS USE IN EVERYDAY LIFE

1. *Exploration*.—Teacher objective: to find out what the pupils already know or do not know about the unit concept.
2. *Presentation*.—To present a brief overview of the ground to be covered and to stimulate interest in the unit.
3. *Assimilation*.

a) A guide sheet outlining—

- (1) The learning products (for the knowledge objective)

.....
[Includes carefully organized reading material or textbook assignments to provide for the learning factor.]

- (2) The visual, emotional, and enjoymental products (for the appreciation objective)

.....
[Includes carefully selected illustrative material to provide for the appreciational factor.]

b) A work sheet outlining—

- (1) The motor creative products (for the habits and skill objective)

(a) Activities and projects for all pupils

.....

(b) Supplementary problems

.....

(c) Optional research

.....

.....
[Includes carefully guided creative and manipulative activities to provide for experience-gaining factor and for the joy of creation and work with the hands.]

c) Assimilation test (to check mastery)

4. *Organization*

- a) Preparation of a carefully organized summary of the significant aspects of the unit.
- b) General outline of the work in a logical and coherent order.

5. *Recitation*.—Pupils give expression to their understandings of the unit by oral or written reports, floor talks, or other exercises at the completion of the work.

Organization of a unit course.—The most important step in the consideration of a unit program is the organization of courses which are adapted to the unit technique. At the present time many courses in art are not suited to the unit plan of teaching. When unit courses are planned, it is necessary to determine the fundamental understandings or basic concepts which we may wish to develop in the course.

First, we would decide on some one specific course with a definite objective as a goal for the course. Let us suggest a course of the general-art type having the social objective as the governing factor. Here the teaching process of the unit "is concerned with putting the pupil in *adjustment* with the world in which he must live and with generating in him adaptability to a constantly changing world."¹ We may say, then, that the purpose of the course is to acquaint the pupil with a knowledge and an understanding of art as a significant factor of the world in which he is to live, or, in other words, to help the child to enjoy more completely the world of which he is a part and to use art intelligently in his surroundings. We would next determine the big, basic considerations which we wish to present for pupil mastery in the course. We would then divide the subject matter of the course into a group of major topics, or themes, upon which we could center the attention of the pupils. It would not be a course merely in drawing, painting, design, or any particular phase of the productive or manipulative activities of art; it would be, first of all, a course based on fundamental life-interests, in which drawing, painting, design, color, construction, and many phases of creative and productive art might be used in attaining the objectives desired.

Perhaps this point of view can be explained satisfactorily by outlining the makeup of one of the new general courses in American history. What are the fundamental understandings which will focus the pupils' attention on the outstanding, significant points of American history? The following topics, or unit themes, illustrate how history teachers have answered this question: Unit I, "Setting the Stage for

¹ Henry C. Morrison, *op. cit.* (1926), p. 14.

Columbus"; Unit II, "Pushing Back the Frontier"; Unit III, "The New World Breaks Away from the Old"; Unit IV, "Making the Constitution"; Unit V, "Testing the Constitution"; Unit VI, "The Industrializing of American Life."¹ Such a course gives a broad and comprehensive picture of the forces which have shaped the development of the American nation. Each unit of the course comprises a definite plan for centering interest on fundamental understandings to be developed. The course itself presents a series of carefully-thought-out concepts, learning factors, or "intelligent attitudes," which, when mastered, will result in the attainment of the objectives established for the course.

Thus, the unit procedure helps to plan systematically for a series of definite steps of progress in learning or adjustments based on preconceived objectives. That, in brief, is the basis of the unit program of teaching.

Determining unit contents.—With respect to each unit of a similar course in art, we would ask the following questions: (1) What are the principal ideas of the unit? (2) What are the problems raised? (3) What must the pupils study about to solve these problems? (4) What appreciations can we develop in connection with the unit theme? (5) What projects and experience-gaining activities, what creative and productive work will contribute to and enrich the learning factors desired?

Let us suppose that we have a unit on color. The questions asked will be: (1) What knowledge about color do we wish to impart? (2) How can this knowledge be used in meeting classroom and life needs? (3) What creative and manipulative activities in color will assist in increasing the pupils' knowledge and use of color in the classroom and in everyday situations? (4) What appreciations, or changed attitudes, can we develop toward color as an element of art and as a phenomenon of nature?

By answering such questions as these in connection with the learning units of various types, we shall be able to devise a teaching procedure and a curriculum in art which will enable us to incorporate all the "immediate" educational objectives demanded by the educa-

¹ D. C. Bailey, *A New Approach to American History*. Chicago: University of Chicago Press, 1927.

tor, namely, worth-while knowledge, attitudes, interests, appreciations, mental techniques, and right habits and skills. We need not reduce the amount of creative work but systematically motivate such work with definite educational factors. Thus, we may develop a well-rounded program of instruction in art which will be on a par with instruction in the so-called "fundamental" subjects of the school.

An experimental unit on color.—The best way to explain the problem of establishing a unit program adapted to art work is to outline and discuss the organization of a unit of subject matter with which experimentation has been made in schools of the North Central Association of Colleges and Secondary Schools.¹ This experimental unit concerns color and is based on the unit pattern adopted by the Commission on Unit Courses and Curricula of the association. The theme of this unit is the art concepts of color and their use. The unit has been divided into the following unit elements, which, when mastered, will supply the learning factors or definite understandings desired: Unit Element 1, "What is Color?" Unit Element 2, "Color Characteristics"; Unit Element 3, "Color Grouping"; Unit Element 4, "Color Harmony"; and Unit Element 5, "Color in Everyday Life." The unit provides for knowledge to be acquired, for appreciations to be developed and enjoyed, and for habits and skills to be mastered through creative and manipulative activities related to the unit. That is, each unit element has been divided into three kinds of work aiming to meet the knowledge objective, the appreciation objective, and the habit and skill objective. Thus, we have a unit which provides for experience-gaining activities by the introduction of problems and projects in creative and manipulative activities in color, but all work is motivated by definite learning factors. The work is further vitalized by the development of the appreciational factors.

Units applied to various courses in art.—The possibility of organizing a great number of teaching units based on fundamental under-

¹ William G. Whitford, "Experimental Unit on Color for High Schools," *North Central Association Quarterly*, VI (March, 1932), 413-24. A reprint of this article may be secured from the office of the *North Central Association Quarterly*, 1439 University Elementary School Building, Ann Arbor, Michigan, for twenty cents.

standings about art and art quality is significant. A similar procedure can be used in working out units appropriate for the many different kinds of art courses given in the school. In an appreciation course the units would follow the technique of the appreciation type and would emphasize the appreciation objective. In a course in pottery or modeling or any phase of the handicrafts, we would follow the unit of the practical-arts type and emphasize the development of skill and actual manipulation of material. In a drawing course we could follow the unit of the language-arts type and emphasize the training of ability to interpret the graphic expressions of others and, at the same time, the development of the pupils' ability to transmit their thoughts to others through the medium of graphic expression.

In all units we would attempt to establish an effective balance of learning factors, appreciation factors, and creative and manipulative factors, with the aim of increasing and expanding the pupils' knowledge and understanding of the field in which they work. In a course in drawing, for example, our pupils would become familiar with the work of outstanding illustrators of the present time; they would learn something of the work of outstanding artists of past periods; they would learn something of the value of drawing to society and the contribution which art makes to living; they would learn as much as possible of the tools, processes, and mediums of expression; and they would, as well, be trained in the development of pure creative expression and a reasonable amount of skill in pictorial and decorative representation.

The development of this kind of instruction for the many different kinds of art experiences offered by the art curriculum involves the expenditure of a great amount of time and energy. Yet it is in this way that teachers of art can accomplish what the educator has long demanded—an educational program for instruction in art.

IMPROVEMENT AND PERMANENCY OF LEARNING RESULTING FROM REMEDIAL INSTRUCTION

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A number of considerations lend significance to a study of the permanency of the results of remedial instruction. One consideration is that, through the use of standardized achievement tests, we are becoming increasingly aware of serious gaps in the curriculum foundation of students in public schools and in colleges. Statistical evidence on this point is presented in Table I. An examination of this table shows that a considerable percentage of the college entrants concerned in this study were weak in such fundamental tools of learning as reading, handwriting, spelling, arithmetic, and English. More than one-fourth of the students tested in silent reading and more than one-third of those tested in computational arithmetic and in English composition failed to attain the standard for the tenth grade, which marks the beginning year of the senior high school. More than one-tenth of those tested in informational geography of the United States, nearly one-fifth of those tested in handwriting, and one-half of those tested in problem-solving arithmetic failed to attain the standard for the seventh grade, which represents the first year of the junior high school. In several of the learning fields covered by the tests, college Freshmen were found who were below the standard for the sixth grade.

Another consideration is that a number of public schools and colleges have organized programs of remediation in an attempt to overcome deficiencies in the students' background preparation. For this reason it is well that the "carry-over" effects of these organized plans for overcoming background deficiencies should be critically appraised. The purpose of this article is to report the results of a study of the improvability and the permanency of learning resulting from remedial instruction given Freshmen at Miami University.

SOURCE OF DATA

The data on which the study is based were derived from the results of initial tests and retests given to students who entered Miami University in the autumn of 1930. The tests (Guiler-Campbell Diagnostic Survey Test in English Fundamentals, constructed by the writer in collaboration with Professor J. Helen Campbell) cover the

TABLE I

DATA SHOWING DEFICIENCIES IN THE BACKGROUND TRAINING OF FRESHMEN
ENTERING MIAMI UNIVERSITY IN SEPTEMBER, 1930

TEST	NUM- BER OF STU- DENTS TEST- ED	PERCENTAGE OF STUDENTS WHO FAILED TO REACH THE STANDARD OF GRADE						
		XII	XI	X	IX	VIII	VII	VI
Monroe Standardized Silent Read- ing Tests.....	341	37	29	28	16	11	7	4
Guiler-Campbell Diagnostic Survey Test in English Fundamentals...	1,000	48	33	19	11	7	2	.....
Hudelson Typical Composition Ability Scale.....	120	82	72	39	12	12	2	.....
Guiler Preliminary Spelling Test...	331	42	27	15	12	12	2	.....
Ayres Measuring Scale for Hand- writing.....	119	.....	.....	.....	.....	18	18	12
Guiler-Christofferson Diagnostic Survey Test in Computational Arithmetic.....	1,000	40	37	34	28	21	8	5
Buckingham Scale for Problems in Arithmetic.....	108	.....	.....	.....	.....	69	50	1
Gregory Tests in American History	108	83	.....	.....	.....	56	.....	.....
Buckingham-Stevenson Place Geog- raphy Test.....	108	.....	.....	.....	.....	20	11	5

following units of English instruction: (1) spelling, (2) capitalization, (3) punctuation, (4) sentence organization, (5) sentence structure, and (6) grammatical usage. The retest is the equivalent of the preliminary test in content and in difficulty. The units in which remedial work was undertaken included capitalization, punctuation, sentence structure, and grammatical usage. On the basis of the initial test scores in each of these four units, the students were divided into two groups: those who were given remedial instruction and those for whom remedial instruction was not provided. Throughout the study the first group is known as the "remedial group" and the

second as the "non-remedial group." The non-remedial students were used as a check group.

In interpreting the data, one should keep in mind the following facts. (1) Both groups of students were enrolled in the regular classes in English composition. In addition to the regular work of the course, the remedial group was given systematic remedial instruction. Since both groups received the same instruction in the regular composition classes, it is fair to assume that any margin of gain made by the remedial group should be attributed to the influence of remedial instruction. (2) As determined on the basis of test scores, the remedial students were far inferior to the non-remedial students both in general intelligence² and in ability in English fundamentals. (3) The remedial work was administered on an individual basis. Each student's difficulties were identified by an analysis of the results of the preliminary test. Moreover, the organization of the teaching and practice material made it possible for each student to focus his attention and effort on his own learning needs.

RESULTS OF REMEDIAL INSTRUCTION

Both groups of students were given the preliminary test when they entered college in September, 1930. The students in the original groups who remained in college until the end of the school year were retested in June, 1931, six months after the remedial program had been completed. The results appear in Table II. In June, 1932, eighteen months after the remedial work had been completed, the students in the original groups who had survived the second year of college were again retested. These results are presented in Table III. The following types of data are found in each table for the remedial and non-remedial groups in each of the four units of learning: (1) number of students involved, (2) mean intelligence score, (3) mean gain in points, and (4) percentage of gain. The percentage of gain was computed by dividing the actual gain by the possible gain. For example, the gain of 75.7 per cent made by the remedial group in capitalization was derived as follows:

$$\frac{[\text{total retest score}] - [\text{total pretest score}]}{[(\text{highest possible score}) \times (\text{number of students})] - [\text{total pretest score}]} = \frac{\text{actual gain}}{\text{possible gain}} = \text{percentage of gain}$$

² The Ohio State University Psychological Test, Form 16, was used for measuring intelligence.

When the formula is applied to the scores, the result is as follows:

$$\frac{1180-806}{(20 \times 65)-806} = \frac{374}{494} = 75.7\%$$

IMPROVEMENT IN LEARNING

One major fact revealed by an analysis of the experimental data is that, in each of the four units of learning covered by the study, the remedial group far exceeded the non-remedial group in the amount

TABLE II

IMPROVEMENT IN LEARNING RESULTING FROM REMEDIAL INSTRUCTION
GIVEN COLLEGE FRESHMEN IN FOUR UNITS OF
ENGLISH COMPOSITION

	CAPITALIZATION		PUNCTUATION		SENTENCE STRUCTURE		GRAMMATICAL USAGE	
	Remedial Group	Non-remedial Group	Remedial Group	Non-remedial Group	Remedial Group	Non-remedial Group	Remedial Group	Non-remedial Group
Number of students.....	65	79	82	62	71	70	95	45
Mean intelligence score...	120	139	121	145	119	139	122	148
Mean pretest score (September, 1930).....	12.4	16.3	11.9	17.0	8.6	14.1	6.4	12.4
Mean retest score (June, 1931).....	18.2	17.5	20.7	22.2	17.2	18.8	14.7	15.1
Mean gain.....	5.8	1.2	8.8	5.2	8.6	4.7	8.3	2.7
Percentage of gain.....	75.7	32.7	62.1	57.8	55.7	47.8	46.9	23.4

of improvement made. This fact is evidenced by Table II in several ways: (1) The difference in mean gains in favor of the remedial group ranged from 3.6 in the punctuation unit to 5.6 in the grammatical-usage unit. In the latter unit the mean gain of the remedial group was more than three times the gain of the non-remedial group. In the capitalization unit the mean gain made by the remedial group was almost five times the corresponding gain made by the non-remedial group. (2) The remedial group in every unit made a greater percentage of gain than did the non-remedial group. The greatest difference in the percentages of gain made by the two groups was found in the capitalization unit, and the smallest difference was found in the punctuation unit. In two of the units (capitalization and grammatical usage) the percentage of improvement made by the

remedial group was double that made by the non-remedial group. (3) Data which cannot be presented here because of space limitations show that a large proportion of the remedial students in each unit made scores in the retest at the end of the year which were better than the highest score attained by any of the same students in the preliminary test at the beginning of the year. On the other hand, only a few non-remedial students in each unit made scores in the retest that were higher than the best score attained by the same students in the pretest. This greater improvement on the part of the remedial group seems all the more significant in view of the fact that the mean intelligence score of the remedial students studying each unit was much lower than that of the non-remedial students. The difference in mean intelligence scores ranged from nineteen points in the capitalization unit to twenty-six points in grammatical usage.

PERMANENCY OF LEARNING

A second major finding revealed by the experimental data is that a great deal of permanency in learning resulted from the remedial instruction. The degree of permanency attained may be seen from Tables II and III. Table II shows the amount of learning retained in each unit by each of the student groups six months after the remedial program had been completed. The important facts in the table have already been pointed out in the discussion of the improvement in learning resulting from remediation, and they will not be repeated in this discussion of the permanency of learning. However, since the retest scores exhibited in Table II were derived from tests given six months after the completion of the remedial work, the mean gain shown in the table should be regarded as objective evidence of permanency of learning as well as evidence of improvement in learning.

Table III gives the mean intelligence score, the mean preliminary test score, the mean gain in points, and the percentage of gain of a number of remedial and non-remedial students who were given the preliminary test covering the four English units during their first week in college and who were retested at the end of their Freshman year and again at the close of their Sophomore year. This table shows that in each unit a marked degree of permanency of learning resulted from remedial instruction. Thus, six months after remediation in

capitalization the mean retest score of the remedial group was 6.3 points higher than their mean pretest score, representing a percentage of gain of 83.5; the corresponding mean gain and the percentage of gain of the non-remedial group were 1.0 and 29.7. Eighteen months after remediation the percentage of gain was 75.5 for the

TABLE III

PERMANENCY OF LEARNING RESULTING FROM REMEDIAL INSTRUCTION
GIVEN COLLEGE FRESHMEN IN FOUR UNITS OF
ENGLISH COMPOSITION

	CAPITALIZATION		PUNCTUATION		SENTENCE STRUCTURE		GRAMMATICAL USAGE	
	Remedial Group	Non-remedial Group	Remedial Group	Non-remedial Group	Remedial Group	Non-remedial Group	Remedial Group	Non-remedial Group
Number of students.....	28	32	28	32	23	37	37	19
Mean intelligence score...	129	147	127	149	128	146	129	158
Mean pretest score (September, 1930).....	12.4	16.8	12.1	17.7	8.4	14.1	6.2	12.4
Mean gain from September, 1930, to June, 1931.....	6.3	1.0	8.7	5.4	9.4	6.0	8.9	4.6
Percentage of gain from September, 1930, to June, 1931.....	83.5	29.7	62.7	64.9	60.1	60.2	49.8	39.5
Mean gain from September, 1930, to June, 1932.....	5.7	0.7	6.0	2.2	10.3	5.1	9.4	4.9
Percentage of gain from September, 1930, to June, 1932.....	75.5	19.8	43.2	26.0	65.9	52.0	52.5	42.3
Mean gain from June, 1931, to June, 1932.....	-0.6	-0.3	-2.7	-3.2	0.9	-0.9	0.5	0.3
Percentage of gain from June, 1931, to June, 1932.....	-3.2	-1.8	-13.0	-13.7	14.7	-4.0	5.5	4.5

remedial group and only 19.8 for the non-remedial group. In the year which elapsed between the first and second retests, the remedial group lost 0.6 points in the mean score, representing 3.2 per cent of the possible loss; the corresponding mean loss for the non-remedial group was 0.3 points, representing 1.8 per cent of the possible loss. The slightly greater loss in capitalization ability sustained by the remedial group during their second year in college seems insignificant in view of the fact that the mean intelligence score of the group was 18 points lower than that of the non-remedial group.

Six months after the close of the remedial period, the mean gain of the retest over the pretest score in punctuation was 8.7 for the remedial group compared with 5.4 for the non-remedial group. Eighteen months after the remediation period had closed, the mean gain of the retest score amounted to 6.0 for the remedial group as contrasted with 2.2 for the non-remedial group. Both groups of students suffered a loss in punctuation ability between the end of their first year and the end of their second year in college. However, despite the difference in mean intelligence scores, amounting to 22 points in favor of the non-remedial group, the remedial group sustained the lesser loss; the loss in mean score was 2.7 points for the remedial group compared with 3.2 points for the non-remedial group.

The "carry-over" effects of remedial instruction in sentence structure is indicated by the fact that, six months after the remedial program had ended, the remedial group attained a mean gain of 9.4 compared with a mean gain of 6.0 attained by the non-remedial group. Eighteen months after remediation the mean gain of the remedial group was double that of the non-remedial group. Between the end of their first year and the close of their second year in college, the remedial group gained 0.9 points in the mean test score; during the same period the non-remedial group lost 0.9 points. The percentage of gain of the remedial group during this period was 14.7 contrasted with a percentage of loss of 4.0 for the non-remedial group. This gain in ability in sentence structure on the part of the remedial group contrasted with the loss in ability sustained by the non-remedial group seems significant as a measure of the permanency of remedial instruction, especially in view of the fact that there was a difference of 18 points in the mean intelligence scores in favor of the non-remedial group.

The difference in the mean intelligence scores in the field of grammatical usage amounted to 29 points in favor of the non-remedial group. Despite this handicap, the remedial group, six months after the completion of the remedial program, had attained a mean gain of 8.9 points over their pretest score, while the non-remedial group had attained a mean gain of only 4.6 points. Eighteen months after remediation the remedial group had achieved a mean gain almost double that achieved by the non-remedial group. Between the end of their

first year and the end of their second year in college, both groups achieved a slight gain in ability to judge the grammatical correctness or incorrectness of discourse. However, the gain was somewhat greater in the case of the remedial group.

One interesting phase of the study had to do with the effect of intelligence on the improbability of learning under remedial instruc-

TABLE IV

MEAN GAINS IN FOUR UNITS OF ENGLISH COMPOSITION MADE AS RESULT OF REMEDIAL INSTRUCTION BY STUDENTS WHOSE INTELLIGENCE SCORES PLACED THEM IN HIGH THIRD, MIDDLE THIRD, AND LOW THIRD OF REMEDIAL GROUP

	Capitalization	Punctuation	Sentence Structure	Grammatical Usage
Number of students:				
High third.....	22	27	24	32
Middle third.....	21	27	23	31
Low third.....	22	28	24	32
Mean intelligence score:				
High third.....	158	157	159	157
Middle third.....	115	118	117	121
Low third.....	87	88	87	91
Mean pretest score:				
High third.....	13.1	12.5	8.8	6.8
Middle third.....	12.0	12.3	9.1	6.4
Low third.....	12.1	11.1	8.0	6.1
Mean gain:				
High third.....	5.0	8.5	9.5	10.4
Middle third.....	6.5	9.1	7.5	8.3
Low third.....	5.7	8.6	8.7	6.0
Percentage of gain:				
High third.....	73	63	62	60
Middle third.....	82	66	50	47
Low third.....	72	58	54	33

tion. Data on this point are found in Table IV. The table shows that the intelligence scores were more predictive of progress in certain learning units than in others. The intelligence scores were most predictive in the grammatical-usage unit and least predictive in the capitalization unit. In the punctuation and sentence-structure units the intelligence scores were only fairly predictive of probable improvement. In the capitalization unit the difference in the percentages of gain made by the students rating in the high third in intelligence and by the students rating in the low third was only 1, while the corresponding difference between students in the middle third and students in the best third was 9 in favor of the middle third. In

the punctuation unit the difference between the percentages of gain made by the students in the high third and students in the middle third was 3. In the sentence-structure unit the corresponding difference in the percentages of gain made by the middle third and by the low third was 4.

SUMMARY

1. In each of the four units in which remedial work was undertaken, the non-remedial group ranked higher than the remedial group in general intelligence. The difference in the mean intelligence scores ranged from eighteen points in the capitalization unit to twenty-nine points in the grammatical-usage unit among the students who completed two years of college.

2. Both groups of students made a great deal of improvement in each of the four units of learning included in the study. However, the progress made by the remedial group in each unit was more marked than that made by the non-remedial group.

3. In each unit, except capitalization, the remedial group retained more of what had been learned than did the non-remedial group.

4. The effect of intelligence on ability to profit by remedial instruction varied with the units in which remediation was attempted. The relation between intelligence scores and achievement in grammatical usage was marked. On the other hand, in capitalization the relation was negligible.

5. The marked improvement and the permanency in learning resulting from remedial instruction was probably due to the fact that the students' difficulties were individually diagnosed and to the further fact that remedial instruction and practice were focused on individual needs.

TENURE OF HIGH-SCHOOL ADMINISTRATORS IN ILLINOIS AND MISSOURI

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The study reported in this article was undertaken for the purpose of investigating the rate of turnover among administrators and supervisors in the high schools of Illinois and Missouri. The city school systems of Chicago, St. Louis, and Kansas City were excluded, as their tenure regulations produce a situation quite different from that existing in the smaller cities and towns. Data were obtained from the directories issued by the state departments of education of the two states for the school year 1930-31.

Schools were classified according to the number of high-school pupils enrolled except in schools in which the course offered is limited to two or three years. In the case of principals the classification took into account the number of pupils in the particular high school. In the case of superintendents in those districts having more than one high school, the total number of high-school pupils in the schools of the district determined the classification.

Because of differences in the organization of high schools in Illinois and in Missouri, the term "principal" in these two states refers to positions somewhat unlike. In the township and the community high schools of Illinois the principal is not responsible to a city superintendent of schools because the elementary-school and the high-school districts are independent units. In Missouri the principal is a subordinate of the superintendent and in the smaller schools is often a teacher with a full-time teaching load. Thus, the available data do not permit an exact comparison of conditions of tenure in the two states.

The tenure of high-school principals in the schools of various sizes is shown in Table I. As was to be expected, the period of tenure is positively related to size of school, but even in the larger schools a considerable number of principals are relatively new in their positions. The median tenure of only three years in Illinois and two

years in Missouri and the large percentages of principals who have moved to new positions within the last two years indicate the high rate of turnover existing during the period just preceding the time

TABLE I
TENURE OF HIGH-SCHOOL PRINCIPALS IN ILLINOIS AND MISSOURI

NUMBER OF YEARS IN POSITION	NUMBER OF PRINCIPALS IN TWO-YEAR HIGH SCHOOLS	NUMBER OF PRINCIPALS IN THREE-YEAR HIGH SCHOOLS	NUMBER OF PRINCIPALS IN FOUR-YEAR HIGH SCHOOLS WITH ENROLMENTS OF—					PRINCIPALS IN ALL SCHOOLS	
			Less than 51	51-100	101-200	201-500	More than 500	Number	Per Cent
Illinois									
1.....	23	57	16	42	32	14	7	191	21.8
2.....	17	23	8	39	33	16	5	141	16.1
3.....	16	29	9	28	24	13	11	130	14.8
4.....	4	16	7	22	16	7	4	76	8.7
5.....	7	14	4	9	22	9	3	68	7.7
6-10.....	12	25	10	49	33	36	17	182	20.8
11 or more.....	4	7	3	15	13	19	28	89	10.1
Total.....	83	171	57	204	173	114	75	877	100.0
Lower quartile	1	1	1	2	2	2	3	2	.....
Median.....	3	3	3	3	3	5	7	3	.....
Upper quartile	5	5	5	7	6	10	13	7	.....
Missouri									
1.....	97	31	53	83	31	9	1	305	34.7
2.....	65	24	32	54	34	7	1	217	24.7
3.....	34	6	20	37	17	10	1	125	14.2
4.....	18	2	11	25	11	7	5	79	9.0
5.....	10	2	5	11	6	6	2	42	4.8
6-10.....	3	2	8	12	26	16	10	77	8.7
11 or more.....	2	0	1	4	11	10	6	34	3.9
Total.....	229	67	130	226	136	65	26	879	100.0
Lower quartile	1	1	1	1	2	3	4	1	.....
Median.....	2	2	2	2	3	4	6	2	.....
Upper quartile	3	2	3	3	6	7	10	4	.....

when the data were collected. While these figures make no allowance for new positions created through the establishment of new schools, it is not likely that such positions would materially alter the results for Illinois. While a large number of the two-year schools in Missouri have been established within the last five years, the fact that tenure in these schools appears to be much the same as

that in the other groups enrolling less than one hundred pupils suggests that the apparent high percentage of recent changes would not disappear if the older schools only were included.

In the case of superintendents the two-year schools pass out of the picture, and thus the number of positions recently created is again negligible. It will be seen from Table II that, as in the previous instances, there is a trend toward greater permanency among the larger schools. While the rate of turnover has been less among

TABLE II
TENURE OF SUPERINTENDENTS OF SCHOOLS IN MISSOURI

NUMBER OF YEARS IN POSITION	NUM- BER OF SUPER- INTEND- ENTS OF THREE- YEAR HIGH SCHOOLS	NUMBER OF SUPERINTENDENTS OF FOUR- YEAR HIGH SCHOOLS WITH ENROLMENTS OF—					SUPERINTEND- ENTS OF ALL SCHOOLS	
		Less than 51	51-100	101-200	201-500	More than 500	Number	Per Cent
1.....	30	48	65	23	5	3	174	26.0
2.....	11	28	42	30	6	1	118	17.8
3.....	11	18	37	22	9	0	97	14.5
4.....	8	18	29	13	5	0	73	10.9
5.....	3	11	27	10	5	1	57	8.5
6-10.....	3	15	38	25	13	7	101	15.1
11 or more.....	0	1	6	19	12	10	48	7.2
Total.....	66	139	244	142	55	22	668	100.0
Lower quartile.....	1	1	1	2	3	6	1	.....
Median.....	2	2	3	3	5	9	3	.....
Upper quartile.....	3	4	5	7	9	14	4	.....

superintendents than among principals in Missouri, the fact that 60 per cent of the principals and 44 per cent of the superintendents are now in positions to which they have come within the last two years shows that Missouri school administrators and supervisors, outside the large cities, are a relatively itinerant group. A similar condition has been shown to exist among principals in Illinois.

While the writer collected no data for other states, no evidence has been previously reported suggesting any greater degree of permanency among school men in communities of similar size in the Middle West. We are confronted once more with facts emphasizing the brief tenure of heads of small schools—a tenure that makes impossible the development and application of long-time constructive policies in small schools and systems.

SELECTED REFERENCES ON STATISTICS AND THEORY OF TEST CONSTRUCTION

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The following bibliography was prepared from issues of educational and psychological journals. The first part deals with contributions to the theory and use of statistical methods, while the second part includes discussions of special applications of statistical method to problems of test construction. No articles on the use of tests have been included in the present list.²

STATISTICS

344. BANKER, HOWARD J. "The Student's Ability Index in Higher Educational Institutions," *Journal of Educational Research*, XXVI (December, 1932), 276-83.
The author has modified, for purposes of wider application, a formula previously derived for use in the elementary grades.
345. BARR, A. S. "A Study of the Amount of Agreement Found in the Results of Four Experimenters Employing the Same Experimental Technique in a Study of the Effects of Visual and Auditory Stimulation on Learning," *Journal of Educational Research*, XXVI (September, 1932), 35-45.
The "repeatability" of experiments is a matter of some importance. In this study the results secured by four experimenters were found to be comparable.
346. EELLS, WALTER CROSBY. "'The Effect of the 6-22-44-22-6 Normal Curve System on Failures and Grade Values'—A Comment," *Journal of Educational Psychology*, XXIII (September, 1932), 466-68.
The author replies to a criticism made by J. De Witt Clinton concerning the use of the normal curve mentioned.
347. EZEKIEL, MORDECAI. "'Student's' Method for Measuring the Significance of a Difference between Matched Groups," *Journal of Educational Psychology*, XXIII (September, 1932), 446-50.

¹ Miss Swineford is a graduate student and research assistant in the Department of Education of the University of Chicago.

² References dealing with the application of tests are included in other lists of the complete series of selected references being published co-operatively in all issues of the *School Review* and the *Elementary School Journal*.

"Student's" method for measuring the probable error of the difference between the scores of two matched groups is compared with that of Wilks and Lindquist through application to actual data.

348. FRANZEN, RAYMOND, and DERRYBERRY, MAHEW. "Reliability of Group Distinctions," *Journal of Educational Psychology*, XXIII (November, 1932), 586-93.
The relative reliabilities of distinctions between groups and distinctions between individuals are discussed.
349. GRIFFIN, HAROLD D. "Constructing a Prediction Chart (Charting Linear Regression Equations)," *Journal of Applied Psychology*, XVI (August, 1932), 406-12.
Detailed directions are given for constructing a chart from which the scores on the criterion can be predicted when any number of variables are involved in the regression equation.
350. GRIFFIN, HAROLD D. "Nomogram for Blakeman's Test for Linearity of Regression," *Journal of Educational Psychology*, XXIII (September, 1932), 460-61.
This nomogram, based on Blakeman's short test for linearity, can be used for $20 \leq N \leq 2000$ and $.0035 \leq r \leq .35$.
351. GRIFFIN, HAROLD D. "How To Construct a Nomogram," *Journal of Educational Psychology*, XXIII (November, 1932), 561-77.
The principle, theory, and steps in the construction of simple nomograms are described, and an annotated bibliography is given.
352. HOLZINGER, KARL J. "The Reliability of a Single Test Item," *Journal of Educational Psychology*, XXIII (September, 1932), 411-17.
Formulas are presented for comparing the reliability of a single test item with the reliability of a long test. A discussion of the author's experimental verification of the formulas is included.
353. HOLZINGER, KARL J., and SWINEFORD, FRANCES. "Uniqueness of Factor Patterns," *Journal of Educational Psychology*, XXIII (April, 1932), 247-58.
Several factor patterns for the same data are presented for the purpose of showing that certain procedures do not necessarily lead to unique results.
354. HORST, PAUL. "A Routine Procedure for Obtaining Comparable Scores," *Journal of Applied Psychology*, XVI (June, 1932), 324-30.
An outline of operations is presented for the purpose of reducing distributions of scores to the normal form so that all the intercorrelations may be linear.
355. HORST, PAUL. "A Method for Determining the Absolute Affective Value of a Series of Stimulus Situations," *Journal of Educational Psychology*, XXIII (September, 1932), 418-40.

The equations required for determining the absolute affective values of stimulus situations are derived. Presents an outline of instructions for the use of the equation, together with a numerical example.

356. LAUDERBACH, J. C., and HAUSE, ENID. "On the Reliability and Validity of Derived Scores Yielded by the McCall Multi-Mental Scale," *Journal of Applied Psychology*, XVI (June, 1932), 322-23.
The New Stanford Achievement Test, Advanced Examination, and the McCall Multi-Mental Scale were given to 324 pupils in Grades IV-VI. The results indicate that "there is little need for using such a mental test as the McCall Multi-Mental Scale in Grades IV-VI, since apparently the test contributes little that we could not discover through using the achievement-battery findings alone."
357. LINE, W., and KAPLAN, E. "The Existence, Measurement and Significance of a Speed Factor in the Abilities of Public School Children," *Journal of Experimental Education*, I (September, 1932), 1-8.
The authors examined intelligence-test scores to find whether these measure some aspect of "speed" that is different from "g."
358. MASTERS, HARRY V., and UPSHALL, C. C. "Table of Probable Errors for Certain Inter-percentile Ranges," *Journal of Educational Psychology*, XXIII (April, 1932), 287-90.
This article includes a table of probable errors and the formulas leading to its construction. An example of the use of the table is given.
359. NYGAARD, P. H. "Interpretation of Correlation on the Basis of Common Elements," *Journal of Educational Psychology*, XXIII (November, 1932), 578-85.
This discussion deals with (1) statement of the theory, (2) illustration, (3) proof of agreement with the regression theory, and (4) application to the Spearman two-factor theory.
360. SIMS, V. M., and KNOX, L. B. "The Reliability and Validity of Multiple-Response Tests When Presented Orally," *Journal of Educational Psychology*, XXIII (December, 1932), 656-62.
Multiple-response tests were presented orally to one hundred high-school pupils and were found to be slightly more difficult and slightly less reliable than, and about as valid as, the same tests presented visually.
361. SIMS, V. M., and SCHULTZ, M. J. "The Relative Validity of Three Measures of Student Achievement," *Journal of Educational Research*, XXV (April-May, 1932), 278-85.
Three measures of achievement, namely, daily marks, monthly test marks, and final examination marks, were evaluated through a study of 1,362 records reported by 15 teachers of 65 high-school classes.
362. SPEARMAN, C. "Pitfalls in the Use of 'Probable Errors,'" *Journal of Educational Psychology*, XXIII (October, 1932), 481-88.

The use, interpretation, and derivation of the probable error of a statistical constant are discussed with especial regard to the tetrad-difference criterion.

363. THOMSON, GODFREY H. "On the Computation of Regression Equations, Partial Correlations, etc.," *British Journal of Psychology*, XXIII (July, 1932), 64-68.

Describes the determinantal method of calculating regression coefficients, multiple and partial correlations, etc.

364. TURNER, AUSTIN H. "The Cumulative Reliability of Frequent Short Objective Tests," *Journal of Educational Research*, XXV (April-May, 1932), 290-95.

The cumulative reliability of a number of short tests was found to equal the reliability of the final examination in the case of thirty-seven students in a course in educational psychology.

365. WHERRY, R. J. "A Modification of the Doolittle Method: A Logarithmic Solution," *Journal of Educational Psychology*, XXIII (September, 1932), 455-59.

Detailed instructions for the solution of normal equations by means of logarithms are presented for those persons who do not have access to a calculating machine.

TEST CONSTRUCTION

366. CUFF, NOEL B. "Scoring Objective Tests," *Journal of Educational Psychology*, XXIII (December, 1932), 681-86.

The author reports an experiment in the scoring of tests leading to the conclusion that, when answers are indicated on an answer sheet which can be marked with a mimeograph, true-false and multiple-choice tests can be scored more rapidly and accurately than when the answers are indicated opposite the test items.

367. HAVEN, S. EDSON, and COPELAND, HERMAN A. "A Note on the 'Multiple Choice' Test," *Journal of Applied Psychology*, XVI (April, 1932), 219-21.

The authors' conclusion, based on test results, is as follows: "It is our belief that the indication of more than one choice on a multiple-response test of a few carefully selected items is of more value for prognostication than a test of many items in which only the first choice is recorded."

368. HURD, A. W. "Comparisons of Short Answer and Multiple Choice Tests Covering Identical Subject Content," *Journal of Educational Research*, XXVI (September, 1932), 28-30.

The two types of tests mentioned are examined for their relative reliabilities and for validity. That test is assumed most valid for which the final testing shows the greatest gain in mean score over the preliminary testing.

369. LEE, J. MURRAY, and SYMONDS, PERCIVAL M. "New-Type or Objective Tests: A Summary of Recent Investigations," *Journal of Educational Psychology*, XXIV (January, 1933), 21-38.
This well-outlined discussion of researches in the field of objective tests made since 1929 supplements Ruch's summary in *The Objective or New-Type Examination*. A bibliography has been included.
370. LENTZ, THEO. F., JR., HIRSHSTEIN, BERTHA, and FINCH, J. H. "Evaluation of Methods of Evaluating Test Items," *Journal of Educational Psychology*, XXIII (May, 1932), 344-50.
Seven methods of evaluating test items are discussed, and four of these are experimentally evaluated.
371. McELWEE, EDNA WILLIS. "Standardization of the Stenquist Mechanical Assembling Test Series III," *Journal of Educational Psychology*, XXIII (September, 1932), 451-54.
Norms for the test named are given for boys six, seven, eight, and nine years of age. The norms are based on one hundred cases in each age group. In addition to the standardization of the test, certain interpretations of the results are discussed.
372. ODELL, C. W. "Educational Measurement in the Secondary School," *Journal of Educational Research*, XXVI (October, 1932), 81-89.
The current situation in the field of secondary-school measurement is discussed, and outstanding studies dealing with tests and testing programs are described.
373. THOMSON, GODFREY H. "The Standardization of Group Tests and the Scatter of Intelligence Quotients," *British Journal of Educational Psychology*, II (June, 1932), 92-138.
The author is convinced, after many years of study, that applying the intelligence-quotient technique to certain group tests of intelligence tends to "handicap the older members of the clever stratum of the age group," even though this technique is correct in the case of normal children. He recommends the use of standard scores which are derived from the data by fitting the best straight lines to "various percentile or other zigzags."
374. THURSTONE, THELMA GWINN. "The Difficulty of a Test and Its Diagnostic Value," *Journal of Educational Psychology*, XXIII (May, 1932), 335-43.
This article reports an attempt to determine the optimal range of difficulty of test items in a diagnostic test. The conclusions are based on the scores of a spelling test of one thousand words given in ten sections to one hundred subjects.

Educational Writings

REVIEWS AND BOOK NOTES

The whole pupil every teacher's challenge.—The reaction against extreme specialization in the division of the task of education is a movement which continues to gather strength. This reaction assumes different forms, but it thrives on the very conditions which would seem to destroy it—the steady expansion of educational science and the larger burdens which society thrusts on the school. Our increasing knowledge of the learner and of the task of fitting him for a complex society enhances our conviction of the need for co-ordinating and integrating all the educational forces which impinge upon him. The key person in this unifying function is the teacher. He is the educational worker who most immediately shapes the pupil's educational environment; he is the person who must understand the pupil if education is to be accomplished; he is the person who must possess a clear vision of the unified personality the creation of which is the school's supreme purpose for each individual pupil.

To this conception of the teacher's function vigorous and clarifying emphasis has been contributed by Miss Strang's volume¹ on the teacher as a factor in personnel work. Many books in this field have been devoted to the whole function of personnel work, of guidance, or of adjustment; a few have dealt with such specialists as deans or advisers. This book is unique, and its service is highly significant. Both secondary and collegiate education are included in its scope.

Through twenty-five chapters, logically organized into five parts, Miss Strang defines the teacher's inevitable part in pupil adjustment and guidance and trains him to play it. Part I defines the scope of personnel work, shows the extent to which schools are staffed with specialists for that function, and clearly portrays the large dependence of the school on the rank and file of teachers for the discovery and the treatment of maladjustment, or for its prevention, both with and without the direction and assistance of specialists. Part II builds up a most comprehensive and admirably organized list of adolescent problems. Numerous researches, both published and unpublished, furnished the sources from which the list was derived. A high sensitivity to the nature and the variety of personnel problems and a respect for the challenge which every pupil's wholesome growth

¹ Ruth Strang, *The Role of the Teacher in Personnel Work*. New York: Teachers College, Columbia University, 1932. Pp. xvi+332.

presents are the chief contributions of these chapters to teacher education.

Part III comprises several chapters on techniques of personnel work. The elements of case studies are described most lucidly (space being considered) and consistently with the avowed purpose of preparing teachers for using these studies, not for the purpose of equipping teachers for making them. A chapter on the interview, preparing teachers for the practical use of that common instrument of personnel activity, is one of the most helpful treatments of this most subjective and unstandardized procedure yet to appear. The chapter on the use of standardized tests is one of the chapters least satisfactory to the reviewer. The varied types of tests are described, but significant points of view concerning the use and interpretation of tests are omitted, the reader being left in considerable fog. Similarly, the chapter dealing with the technique of rating does not present, as clearly as teachers need to know them, the pitfalls which scientific investigations have revealed in such activity nor the resultant criteria of a valid rating scheme. The chapter on the daily schedule as an advisory technique describes the use and the value of an important new instrument, in the development of which Miss Strang herself has been one of the pioneers.

The counseling process, which is treated in Part IV, is not necessarily a process separate from that of collecting information about pupils, says the author, but for purposes of clear exposition she found it advantageous to treat the topics separately. This part gives excellent suggestions without advancing formulas which are too specific and with plenty of caution about using any set procedure. Very appropriately, a chapter of six pages lays down the principles of mental hygiene for the teacher himself. Part V is devoted to giving the teacher information concerning specific problems. In a little over fifty pages Miss Strang gives an amazing amount of information, valuable for counselors, with reference to social, physical, emotional, and moral maturing and also with reference to successful studentship. This treatment is not encyclopedic; it touches essentials skilfully and readably.

A gratifying dependence on scientific studies characterizes this volume. It reflects modern theory in education, psychology, and sociology. The bibliographies are well selected and topically organized; they build out the book to the proportions of a rich course.

This volume should be studied by all teachers and teachers in training. It enhances the stature of their profession. It creates a sense of responsibility for the whole pupil, but at the same time it reveals the field of personnel work to such an extent as to create an appreciation of the need of the expert. Many administrators and personnel specialists would profit from reading this book because of its delineation of personnel activity as an integral part of the educational task and for its exposition of the part appropriately played by the teacher.

PERCIVAL W. HUTSON

UNIVERSITY OF PITTSBURGH

What lies ahead in American education?—In a few short pages¹ an American educational philosopher advocates the unifying of the several horizontal divisions of the American school system into a single school system. Briefly and clearly he furnishes a résumé of the growth in public-school enrolments during the nineteenth and twentieth centuries. He criticizes adversely the failure of secondary institutions to keep in mind their true function of educating youth.

Conclusive evidence is offered to prove that, because of social and economic pressure, enrolments in secondary and higher institutions will continue to increase until well toward the saturation point, in high school at least. In other words, America will soon be face to face with the problem of furnishing education to virtually all youth between the years of five and eighteen. Junior-college developments will expand and consequently prolong the years of education beyond the high school. Already many communities are staggering under the load of taxation for schools. The conclusion of the author is that the economic burden cannot continue to be borne by the taxpayer without some relief.

His suggested solution, as has been indicated, would be to bring the various parts of the school system into a single system, which he designates as "the common school." He maintains that, if his suggestion were carried out, much of the present overhead cost could be saved. At the same time, pupils could be given opportunities for real learning, and not, as now, be compelled to submit to being passed from grade to grade on the basis of time spent or credits earned. This unified school would be "common" (1) because all the youth of the nation would be in attendance, (2) because common instruction would be given, and (3) because civic training would prepare for active citizenship. In the opinion of the author, this plan would signify a "return to the original purpose of the common school" (p. 60).

It is amazing to discover how many phases of educational history and philosophy have been expounded in so brief a space. Only a few minutes are required to read the booklet, but one will return to it for re-reading time and again. While reading, one finds one's self repeatedly wondering what the author might have said had time permitted him to digress or to carry a point to a further conclusion. Not all educators will favor the proposed plan for unification, but all will agree that here is a proposal which has merit and much supporting evidence.

G. W. WILLETT

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Orientation in secondary education.—A textbook in secondary education² states in its Preface that it is a treatment of current problems in curriculum and

¹ Henry C. Morrison, *The Evolving Common School*. The Inglis Lecture, 1933. Cambridge, Massachusetts: Harvard University Press, 1933. Pp. 62. \$1.00.

² Herbert G. Lull, *Secondary Education: Orientation and Program*. New York: W. W. Norton & Co., Inc., 1932. Pp. xviii+366.

instruction. The general process of validation of the content is indicated by the author when he states that the "philosophy of experience is drawn upon to appraise traditional and current practices" (p. xv). The book contains nineteen chapters with a variety of headings—some familiar, others expressive of the philosophy of experience drawn on.

As a textbook for giving students a view of the curriculum, the book contains some valuable information. The first four chapters present significant data on the curriculum of the early American secondary school. A chapter dealing with the influence of college-admission requirements on high-school instruction gives much concrete material supplying abundant evidence for the generalizations made by the author, as well as significant data which students may study with profit. A chapter on the curriculum lag discusses the recommendations of two of the outstanding national committees, the Committee of Ten and the Commission on the Reorganization of Secondary Education. In this discussion the author has presented copious quotations from the reports of these committees but has not shown in a convincing way the potency of these reports in the determination of the curriculum in the last thirty years. The chapter is concluded by a discussion of the development of the senior high school since 1910, to which very meager space is devoted, no data being offered. The discussion of this important period of development is concluded with a few generalizations.

In a chapter on the social orientation of the curriculum, the author shows the wide gap between life and school, declaring that a new educational renaissance is needed with the high school as the strategic point of attack. Principles are presented which the author thinks should guide in building a curriculum that will mirror life. Chapters viii and ix present an account of curriculum-making in the social studies, in which crucial problems are determined by securing opinions of outstanding leaders. These problems are organized by using what the author calls the principle of contrast. While the problems chosen are familiar and the principle of contrast has had wide application in the social studies, still the units outlined compare favorably with similar units that have been presented elsewhere.

In the last ten chapters the author presents his theory of curriculum-making, which he states is based on the assumption that "education should closely parallel modern civilization and should select those elements of traditional culture which throw light upon the modern. And, furthermore, education should attempt to appraise the trends of modern cultures for the purpose of conserving and developing those that appear to possess the sources of future progress" (p. 176). These chapters present philosophical and subjective criteria for the determination of the subjects of the program of studies and their content. No objective data are afforded as a basis for determining the subjects or their content.

The author invokes the philosophy of experience, which of course is his own philosophy, to decide what subjects shall constitute the curriculum. However, the objectives which he uses for both the junior and the senior high school are,

with slight modifications, those projected in *Cardinal Principles of Secondary Education* (United States Bureau of Education Bulletin No. 35, 1918). Around these objectives the subjects which should contribute to their attainment are arranged to make up the curriculums for various pupil groups. The discussion of learning units, which follows the Morrison technique, reveals a lack of concrete materials to make clear the theory.

A noteworthy feature of the book is the attempt made by the author to set up a philosophy of secondary education which might guide in breaking away from tradition and in bringing the curriculum into closer relations to the world of today.

T. J. KIRBY

UNIVERSITY OF IOWA

Evaluation of vocational education in agriculture.—Fifteen years have passed since Woodrow Wilson signed the Smith-Hughes Act, which gave national impetus to vocational agricultural education in the secondary schools. Feeling that a study of results so far attained would be valuable as a measure of progress and as a guide for future action, Schmidt¹ has recently completed the gathering and compiling of pertinent data and has offered criticisms and recommendations based thereon.

The author is concerned not alone with the *vocational* phase of the farmer-training program but also with what he terms the "general" phase of education in such training. He states that the general problem involved in the study divides itself into two principal problems: (1) To what degree do the instruction and the training offered in all-day vocational classes in the secondary schools conform to factors characterizing an effective vocational-training program? (2) To what degree are the general educational subjects which are required in the vocational-agriculture curriculum subjects that offer the best possible instruction for effective citizenship or for making a well-rounded course of training? The questionnaire procedure of gathering data and securing "expert opinion" was the principal method of investigation.

Schmidt finds that experts in vocational education agree on thirteen factors as characteristic of an effective vocational program. These factors represent conditions which seem essential in securing efficient results in a preparatory vocational-training program in agriculture. These are used throughout the study as bases for comparison and evaluation. The opinions of forty-seven recognized leaders in secondary education were secured for the purpose of determining the desirable non-vocational constants for the curriculum in agriculture. These are checked against the situation as it exists at present. Twenty-seven state plans for vocational education as they pertain to vocational agriculture were analyzed

¹ G. A. Schmidt, *Vocational Education in Agriculture in Federally-aided Secondary Schools: A Study of Its Instructional and Training Phases*. Teachers College Contributions to Education, No 534. New York: Teachers College, Columbia University, 1932. Pp. x+94. \$1.50.

and evaluated. The author found that most of these plans are entirely too generalized and too vague and that they are often inefficient.

Data concerning the age, purpose in taking the training, residence on farms, and location of supervised practice for boys enrolled in full-time courses are given. Some important questions are raised in this section regarding the functional efficiency of the present program. Other chapters present data and discuss problems involved in the character of courses in agriculture, methods of teaching, and the administration of the courses.

Schmidt's contribution offers timely and fairly complete information with regard to the present situation in certain important aspects of vocational agricultural education. The data appear to be reliable except for the limitation that expressions of 153 teachers as to their practices are likely to be as much influenced by "what they know they should do" as by "what they actually do." This fault, however, is common when the questionnaire and the check-list methods are used and, if understood by the reader, need not entirely invalidate findings. The reviewer feels that this book presents some forward-looking suggestions and that all persons interested in vocational education will find profit in giving it a thoughtful reading.

SHERMAN DICKINSON

UNIVERSITY OF MISSOURI

An admirable atlas for the social studies.—Almost three decades ago J. F. Jameson formulated a plan which has been carried out by an author, Charles O. Paullin, and an editor, John K. Wright. Paullin and Wright, in collaboration with a group of specialists in American history and geography, have produced an atlas¹ which merits the attention not only of scholars in their respective fields but also of teachers of the social studies in the schools and of the teaching profession generally.

The *Atlas* includes essential materials in the political, economic, social, military, educational, and religious history of the United States that can be presented in maps. A series of introductory plates illustrate the natural environment of the continent as a background for the study of American history, including winds, ocean currents, limits of glaciation, and regions. These are followed by a series of maps dealing with data on the physiography, forests, climate, mineral resources, and soil and vegetation areas of the United States. In another section forty-eight early maps are reproduced to show the widening geographical knowledge of North America from 1492 to 1867. These are followed by several maps of the routes of explorers. Data on the Indians from the early days of the explorers to the reservations at the present time and many phases of lands, including territorial questions, boundaries and boundary disputes, and disposal of federal lands, are presented in a wide variety of maps. Still other series of plates and maps show the westward expansion of the frontier; the growth of population;

¹ Charles O. Paullin, *Atlas of the Historical Geography of the United States*. Washington: Carnegie Institution of Washington and American Geographical Society of New York, 1932. Pp. xvi+162 and 166 plates. \$15.00.

the progress of campaigns in Colonial and later wars; the cultural, educational, and religious development of the country; and early plans of the principal cities.

A large subdivision is devoted to the history of agriculture, transportation, commerce, manufacturing, wealth, and foreign trade, with special series of maps for particular phases of each of these subjects. Political maps show votes in presidential elections; the distribution by congressional districts of votes on important legislation; and the progress of major reform movements, such as abolition, qualifications for suffrage, labor legislation, woman suffrage, and prohibition. Particular emphasis is placed on the westward expansion associated with the frontier, the internal development and rapid material expansion of the country, the growth of sectionalism in politics, and the influence of natural and economic regions on politics and the formulation of policies.

This folio volume includes, in addition to more than 620 maps in black and white and in color, an introduction by the editor, an explanatory text (145 pages printed in double columns) which presents the sources of information and details in the compilation and interpretation of the maps, and a fourteen-page index. The volume is printed on paper of fine quality and is durably bound. The plates are excellent, and those in color are pleasing and legible. The number of subjects included on a map is limited and consequently is not confusing to the reader.

The *Atlas*, representing almost two decades of research in its compilation, sets a high standard of excellence for publications of this type. Scholars and students in the social sciences and education should find it an invaluable addition to their professional libraries. Alert teachers of American history, civics, economics, sociology, and economic and commercial geography will find it indispensable. It should find a place in the social-studies section of all secondary-school libraries.

W. G. KIMMEL

THE SOCIAL STUDIES INVESTIGATION
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A valuable collation for teachers of language.—A recent publication of the Committee on Modern Language Teaching¹ is more detailed, analytical, and complete in its bibliographical material than many such compilations. It is not intended for the beginner in the study of the pedagogy of linguistics, but the material included will serve to advantage for those interested in the training of teachers and for teachers who have a desire to effect progressive improvement in their own methods.

The bibliography reviews articles for the years 1927-32 under the following topics: (1) psychology of language-learning; (2) general trends in language-teaching; (3) aims, materials, and methods; (4) tests and testing; (5) correlation

¹ *An Analytical Bibliography of Modern Language Teaching, 1927-1932*. Compiled for the Committee on Modern Language Teaching by Algernon Coleman, with the assistance of Agnes Jacques. Chicago: University of Chicago Press, 1933. Pp. xiv + 296. \$3.00.

and transfer; (6) training of teachers; and (7) foreign-language-teaching in European schools. As would naturally be expected, the greater number of references are concerned with aims, materials, and methods. This division is fortunate since the classroom teacher is primarily interested in the problem of improved method. In summarizing this phase of the work, the committee states in the Foreword that the work of the American and Canadian committees enabled educationists and teachers for the first time to measure accurately the results of instruction, to evaluate standards of achievement, and to apply reliable criteria in their search for better materials and improved methods.

The technique of annotation is unusually good, and the reader is able in most cases to gain a surprisingly accurate knowledge of the articles reviewed. For example, it is scarcely necessary, because of the excellence of the summary, to re-read such an article as the one by Frederic D. Cheydeleur. It is likewise possible to survey the other branches in the field of language-teaching and to conclude the reading with a very fair notion of the progress which has been made.

Mention is made by the committee of the "meager harvest" of controlled experimentation of language-learning processes. The reviewer noted the same lack as late as 1929 and planned a series of experiments, one of which has to date been published (Stevenson Smith and Francis F. Powers, "The Relative Value of Vocabulary and Sentence Practice for Language Learning," *Journal of Social Psychology*, I [November, 1930], 451-62). One can easily agree with the author that a pressing need at the present time is further experimentation on psychological phases of method.

The volume is a scholarly and worth-while contribution, which should be read by every progressive teacher of modern foreign language. The series should certainly be carried on for the period 1932-37, etc. A suggestion which might be followed in the compilation of continuations in the future would be the inclusion of a subject index in addition to the author index. While reading the book for purposes of reviewing, the reviewer was asked by one of his students for some recent references on the use of the project method in the teaching of modern foreign language. Finding the material in this bibliography necessitated going through the volume page by page, a time-consuming and laborious process. A subject index would repay the trouble of its construction.

UNIVERSITY OF WASHINGTON

FRANCIS F. POWERS

A book for teachers on the theater in the school.—The first question which a prospective purchaser of a book on school dramatics will ask is whether it is written for the pupil or for the teacher. That is, is it a class textbook or is it a reference work for the teacher? Representative volumes in the steadily accumulating literature on the subject demonstrate that the answer to this question will determine quickly a book's desirability in relation to school or personal needs. All writings on the subject will not, of course, fall into one or the other of these classifications. Some are intended as a combination, but in such cases a

standard of placement will reveal that very fact. The next point the possible buyer ought to consider is whether the book is theoretical (no disparagement is thereby implied) or practical. The third point to be considered is the book's value in the department to which it is assigned by the first two criteria.

A brief answer to the first two questions is provided by the authors in their Introduction to a new book on school dramatics:¹ "This book is intended as a practical guide for the teacher" (p. 13). In support of that statement they say that their book aims "to clarify for the teacher the ideals and objectives of educational dramatics . . . to meet the specific needs of the . . . secondary schools," and, finally, "to show how educational dramatics may be oriented in the school curriculum" (pp. 12-13).

The book has two large divisions, a glossary, and two appendixes by two other collaborators, Isabel McReynolds Gray and Tempe E. Allison. Part I deals with the history and the place of the theater in the school and the selection and production of plays. Part II discusses actual presentation in its various phases—stage construction, setting, lighting, decoration, costume, and makeup. Appendix 1 contains exercises for drama students, and Appendix 2 gives a bibliography of books and plays. The chapter topics, in Part II especially, and the numerous diagrams assure the reader of the authors' good intentions toward practicality, but the actual material in the chapters disappoints by its generalizing and emphasis on description of elaborate theater machinery known only, and often rarely, to the teacher in large cities. A good glossary, however, supplements the text satisfactorily. The real faults of the book seem, indeed, to lie in Part II. This section is poorly arranged, is repetitious, and has an index lacking in sufficient detail. Part I, on the other hand, with its history of the school theater and essays on the place of the theater in the curriculum, is of real and positive value. Its outspokenness against undue emphasis on certain phases of production, such as the "star" system, lighting effects, and the domination of the box office, is refreshing. The dramatic exercises in Appendix 1 appear practical, and Appendix 2 offers a really excellent, well-selected, and well-classified list of books and plays.

In summarization, the reviewer feels that the book would have been of greater value if some pruning had been done. Emphasis might have been allowed to rest on the theory of the theater in the school. A combination of the material of Part II and that of the glossary, with better accessibility, would then have completed a most usable volume.

LOUIS TRAVERS

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Three modern textbooks in secondary-school mathematics.—Modern tendencies in the construction of textbooks usually follow three distinct lines. These tendencies are a result of what we might term a "reform" in the selection and the

¹ Samuel J. Hume and Lois M. Foster, *Theater and School*. New York: Samuel French, 1932. Pp. viii+418. \$3.50.

organization of instructional materials in courses in mathematics. The first tendency is to reorganize pedagogically the materials of the course, within the course, to facilitate learning and to enhance instructional values. The second tendency utilizes the principle of fusion of concepts and processes, taken from various branches of mathematics, into coherent teaching units. The unifying principle recommended by most of the leading educators in the field of mathematics has been the function concept. The third tendency utilizes the findings of educational psychologists in providing means for facilitating instruction and for evaluating learning products. As a result, the modern textbook in mathematics contains many carefully selected drills and various types of tests which the teacher may use to advantage in the classroom.

The first book reviewed here¹ is an example of the first type of organization, namely, a recasting of the materials of the course which will make demonstrative geometry easy to learn and easy to teach. The textbook embodies the findings of a study the purpose of which was to determine suitable instructional materials and to present methods of instruction which would improve the teaching of demonstrative geometry. The author proceeded systematically to study the available literature, determined the materials and methods, subjected them to trial and experimentation in the classroom, and finally embodied them in the textbook. The organization of the textbook is traditional in the sense that it is divided into five books: Book I is devoted to straight-line figures; Book II, to the circle; Book III, to similar polygons; Book IV, to areas of polygons; and Book V, to measurement of the circle. However, many features characterize this book as having a modern organization. The fundamental theorems and constructions are numbered consecutively. Modern tests, such as matching tests and multiple-choice tests, are included in each book. A page of bibliography at the end presents helpful materials for the teacher. The presentations and expositions are addressed directly to the pupil in a very readable form.

The second book² presents algebra and trigonometry together, to constitute two semesters' work. The organization clearly follows the second tendency, namely, that of fusion. The attempt is to present algebraic and trigonometric principles, not as separate branches of mathematics, but rather as manifestations of the same fundamental concept. Thus, trigonometric relations add richness to the algebraic study of functionality, and algebra clarifies trigonometric relations and enhances their pedagogical values. However, the main feature of this textbook is its unique organization. Instead of chapters there are ninety-nine lessons with ten pages of "general review" and nine pages of "additional topics." Logarithms are introduced early in the course and are constantly used, a feature which most teachers will readily welcome. Four- and five-place tables are included.

¹ Elizabeth Buchanan Cowley, *Plane Geometry*. Newark, New Jersey: Silver, Burdett & Co., 1932. Pp. xii+368. \$1.40.

² Joseph B. Orleans and Hallie S. Poole, *Eleventh Year Mathematics: Intermediate Algebra and Trigonometry*. Boston: D. C. Heath & Co., 1932. Pp. x+262. \$1.32.

The idea of fusion is not, however, satisfactorily carried out in the arrangement of the lessons; that is, there is no unifying principle in the order of the lessons. The reviewer is unable to see any connection between the algebraic and trigonometric principles treated nor any justification for the particular order of presentation. Furthermore, word problems are introduced which bear no relation to the process or concept on which the lesson is based. In the Preface the authors explain this particular procedure by stating that each lesson has a verbal problem in order to meet the difficulty that pupils meet in solving problems. However, each problem could be based on a specific application of the process treated in the lesson and thus become an element in the learning of the process.

The third book¹ is a textbook in algebra for the first-year course in high school. The book is organized and developed along traditional lines. Graphs and numerical trigonometry are introduced to illustrate functionality, but the function concept is not adequately treated. The book is divided into ten chapters, carrying the pupil through the quadratic equation. The authors have followed the same type of treatment used in their series entitled "Standard Mathematical Service," namely, the use of "self-teaching drills," "problem scales," and "chapter inventories."

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